

REVISED PHASE II ENVIRONMENTAL SITE ASSESSMENT

**APPROXIMATELY 0.43 ACRES OF LAND
8626 MARTIN LUTHER KING JR. BOULEVARD
HOUSTON, HARRIS COUNTY, TEXAS**

May 7, 2018
Project No. 92177354A

Prepared for:
City of Houston
Public Works & Engineering
1002 Washington Avenue
Houston, Texas 77002

Prepared by:
Terracon Consultants, Inc.
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terracon.com

Terracon

Environmental



Facilities



Geotechnical



Materials

May 7, 2018

Ms. Jennifer M. Clancey
City of Houston
Public Works & Engineering
1002 Washington Avenue
Houston, Texas 77002

Phone: (832) 394-9005
Email: jennifer.clancey@houstontx.gov

Re: **Revised Phase II Environmental Site Assessment**
Approximately 0.43 Acre of Land - MLK
8626 Martin Luther King Jr. Boulevard
Houston, Harris County, Texas
Terracon Project No. 92177354A

Dear Ms. Clancey:

Terracon Consultants, Inc. (Terracon) is pleased to submit this Revised Phase II Environmental Site Assessment (Phase II ESA) report for the above referenced site. This investigation was performed in accordance with Terracon's Proposal No. P92177354A, dated July 3, 2017, and completed under a Brownfields Grant from the United States Environmental Protection Agency (EPA).

We appreciate the opportunity to perform these services for the City of Houston Public Works and Engineering Department. Please contact either of the undersigned at (713) 690-8989 if you have questions regarding the information provided in the report.

Sincerely,
Terracon Consultants, Inc.
(TBPE Firm Registration No. F-3272)
(TBPG Firm Registration No. 50058)


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**Approximately 0.43 Acre of Land - MLK
8626 Martin Luther King Jr. Boulevard
Houston, Harris County, Texas**

**Terracon Project No. 92177354A
May 7, 2018**

1.0 INTRODUCTION

The site consists of approximately 0.43 acre of land located at 8626 Martin Luther King Boulevard in Houston, Harris County, Texas. The site is currently developed with a paved parking area with remnants of a former gas station and an underground storage tank (UST) system located on the eastern portion of the site. The western portion of the site was undeveloped, wooded land.

1.1 Scope of Work

Terracon Consultants, Inc. (Terracon) conducted a Phase II Environmental Site Assessment (Phase II ESA) at the above referenced site. A Site Vicinity Map is included as Exhibit 1 that shows the site in relation to the surrounding area. The Phase II ESA was conducted in accordance with Terracon's Proposal No. P92177354A, dated July 3, 2017, and completed under a Brownfields Grant from the United States Environmental Protection Agency (EPA).

The scope of work for this Phase II ESA was based on results of Terracon's Phase I Environmental Site Assessment (ESA, 92177354 dated June 3, 2017) which identified the following recognized environmental condition (REC):

n Diamond Shamrock

Diamond Shamrock, located on-site, was identified in the regulatory database report as a Petroleum Storage Tank (PST) and Facility Registry System (FRSTX) facility. According to the regulatory database, Diamond Shamrock was identified as an FRSTX facility due to its presence on the Texas Commission on Environmental Quality (TCEQ) - Agency Central Registry. Diamond Shamrock previously operated three 8,000-gallon gasoline PSTs which were reportedly installed in January 1972 and are listed as "Temporarily Out of Use" as of 2006. The site was not identified as a TCEQ Leaking Petroleum Storage Tank (LPST) facility. Based on the duration of operation (approximately 40+ years) and the high potential for a release associated with PST systems, the former on-site PST system constitutes an REC to the site.

The objective of the Work Plan for the Phase II ESA was to investigate soil and groundwater at the site for total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs) and/or

polycyclic aromatic hydrocarbons (PAHs). This Work Plan followed the site-specific Quality Assurance Project Plan (QAPP) that had been prepared for this site. The Phase II ESA included the advancement of five soil borings that were converted into temporary groundwater sampling points (TSPs) for collection and analysis soil and groundwater samples.

1.2 Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time period. Terracon makes no warranties, either express or implied, regarding the findings, conclusions or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies or other third parties supplying information used in the preparation of the report. These Phase II ESA services were performed in accordance with the scope of work agreed with you, our Client, as reflected in our proposal and QAPP.

1.3 Additional Scope Limitations

Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, non-detectable or not present during these services, and we cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this Phase II ESA. Subsurface conditions may vary from those encountered at specific borings or wells or during other surveys, tests, assessments, investigations or exploratory services; the data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services.

1.4 Reliance

This Phase II ESA report has been prepared for the exclusive use of City of Houston Brownfields Redevelopment Program (COH) and United States Environmental Protection Agency (EPA), and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the site) is prohibited without the express written authorization of the COH and Terracon. Any unauthorized distribution or reuse is at the User's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the proposal, Phase II ESA report, and the COH Contract for Professional Environmental Consulting Services for Brownfields Redevelopment Program 2014 Brownfields Assessment Grant (Contract 4600013702). The limitation of liability defined in the COH Contract 4600013702 is the aggregate limit of Terracon's liability to the Client and all relying parties unless otherwise agreed in writing.

2.0 FIELD ACTIVITIES

2.1 Soil Borings and Temporary Groundwater Sampling Points

The Phase II ESA field activities were conducted on August 24, 2017. Ms. Sheraden Porter of Terracon was present during the field activities to direct the work, log the borings and collect samples. Five soil borings were advanced in reasonably accessible locations throughout the site for the purposes of collecting soil samples for laboratory analysis to evaluate the on-site REC identified during Terracon's ESA. The soil borings were completed as temporary groundwater sampling points (TSP-1 through TSP-5) to facilitate the collection of groundwater samples. Exhibit 2 is a Site Plan that shows the location of the soil borings/temporary groundwater sampling points in relation to the pertinent structures and site boundaries. Photographs taken during the Phase II ESA are presented in Appendix A. Field notes taken during the Phase II ESA are presented in Appendix B.

The soil borings were advanced by a Monitor Well Driller licensed in the State of Texas to depths totaling 16 feet below ground surface (bgs) using a track-mounted direct push-technology (DPT) rig. Sampling equipment was decontaminated by an Alconox wash, potable water rinse and final distilled water rinse prior to commencement of the project and between the installation of each soil boring.

- Soil Borings TSP-1 and TSP-2 were advanced near the northeast corner of the site at the location of on-site UST.
- Soil borings TSP-3 and TSP-5 were advanced in the east-central portion of the site at the location of the former dispenser islands.
- Soil boring TSP-4 was advanced in the east-central portion of the site within the central portion of the former building footprint.

Soil cores were collected continuously from the surface to the maximum terminal depths using 4.0-foot long sample barrels with acetate liners. The soil cores were examined in the field to document lithology, color, moisture content, and visual or olfactory evidence of impact. In addition, the samples were screened with an organic vapor monitor (OVM) equipped with a photoionization detector (PID) to detect the presence of volatile organic vapors.

The lithologies encountered at boring locations TSP-1 and TSP-2 generally consisted of a layer of sandy clay which extended from near the surface to a depth of 8 feet bgs. This sandy clay layer was underlain by a layer of clay which extended to a depth of 10 feet bgs followed by a layer of sandy clay that terminated at depth of 12 feet bgs. Beneath this sandy clay layer was a layer of saturated sand which extended to a depth of 14 feet bgs. The saturated sand was underlain by a layer of clay which extended to at least the terminal depth of the boring in TSP-1 (16 feet bgs)

and to a depth of 15.5 feet bgs in TSP-2. In the location of TSP-2, the clay layer was underlain by a layer of sand which extended beyond the terminal depth of the boring.

The lithologies encountered at boring locations TSP-3 through TSP-5 generally consisted of a layer of sandy clay which extended from near the surface to depths of 10.5 to 14 feet bgs. The sandy clay layer was underlain by a layer of saturated sand/clayey sand which extended to depths of 11 to 15 feet bgs. Beneath this sand/clayey sand was a layer of clay which extended beyond the maximum boring depths (16 feet bgs).

Groundwater was encountered at depths of approximately 10.5 to 14 feet bgs. Detailed lithologic descriptions are presented on the soil boring logs included in Appendix C.

At the completion of drilling, the soil borings were converted to temporary groundwater sampling points. Each temporary groundwater sampling point consisted of 10 feet of 1.0-inch diameter polyvinyl chloride (PVC) well screen with 0.010-inch slots, a threaded bottom cap, and a sufficient length of one-inch diameter PVC riser pipe to reach the surface.

After installation, the temporary groundwater sampling points were developed by removing groundwater with a peristaltic pump and dedicated plastic tubing until the purge water was relatively free of fine-grained sediment. Following the completion of sampling activities, the TSPs were removed and the boreholes abandoned in accordance with applicable regulations.

Soil cuttings and purge water generated during the investigation were contained within a Department of Transportation (DOT) approved, 55-gallon steel drum, appropriately labeled with contents and project-specific information and date. One drum containing soil cuttings and purge/decontamination water was generated as part of the Phase II ESA. Please note that on March 6, 2018, IKON Environmental Solutions, LP (IKON) was sent to the site to transport and dispose of the drum as a Non-Hazardous Class 2 soil material. However, upon arrival to the site, IKON was unable to locate the drum. IKON surveyed the entire site and surrounding area to no avail; therefore, a determination was made that the drum had been removed (stolen) from the site by an unknown party or individual(s). Documentation including a copy of the waste manifest and supporting letter from IKON regarding the waste disposal are included in Appendix B.

Please note that although the drum had been stolen from the site, there is no apparent threat of impact to the environment or human health. Based on review of the analytical data, chemicals of concern were not detected in the composite sample collected from the DOT drum containing soil cuttings and purge water at concentrations exceeding Texas Risk Reduction Program (TRRP) Tier 1 Residential soil-to-groundwater (^{GW}Soil_{Ing}) protective concentration levels (PCLs) for a residential site with a 0.5-acre source area and TRRP Tier 1 Residential health-based (^{Tot}Soil_{Comb}) PCLs. The residential health-based ^{Tot}Soil_{Comb} PCL is derived for protection of individuals who may encounter impacted soil via ingestion, dermal contact, and inhalation of vapors and/or particulate matter.

2.2 Soil and Groundwater Sampling

The soil sampling program developed by Terracon consisted of collecting two soil samples from select 2.0-foot intervals from each boring location (collected from the soil interval with the highest potential for environmental impact based on visual, olfactory or PID evidence; from the soil interval above the groundwater saturation zone [capillary fringe]; and/or from the terminus of the boring). If no evidence of impact was detected by field screening, soil samples were to be collected from an interval selected in the field. Soil sample intervals for each boring are provided on the lithologic boring logs included in Appendix C.

After each temporary groundwater sampling point had been developed, the groundwater level within the groundwater sampling point was allowed to stabilize before groundwater samples were collected using a peristaltic pump and/or disposable plastic bailer.

Soil and groundwater samples were collected in laboratory prepared glassware or TerraCore™ sampling kits and placed on ice in a cooler. The samples, along with the completed chain-of-custody forms, were relinquished to Xenco Laboratories in Houston, Texas for analysis. Proper chain of custody documentation was maintained throughout the sampling process. Laboratory QA/QC procedures are included with the laboratory report.

3.0 LABORATORY ANALYTICAL PROGRAM

The analytical program developed by Terracon was based on the potential environmental concerns identified during the ESA (former PST facility). Soil and groundwater samples were analyzed for TPH using TCEQ test method TX1005, VOCs using United States Environmental Protection Agency (EPA) test method 8260B and/or PAH using EPA test method 8270C.

4.0 INVESTIGATION RESULTS AND EVALUATION

The soil sample analytical results have been summarized in Tables 1 and 2. The groundwater sample analytical results have been summarized in Tables 3 and 4. A copy of the analytical report and chain-of-custody form is included in Appendix D.

Terracon compared the concentrations of the constituents detected in the samples to TCEQ PST Program Action Levels. The TCEQ PST Action Level is the lowest applicable health-based or groundwater protective target concentration established by the TCEQ PST Program. For constituents that do not have a PST Action Level, Terracon compared the concentrations of the constituents detected in the samples to TRRP Action Levels. The Action Levels for soil are equivalent to the TRRP Tier 1 critical PCLs for a residential site with a 0.5-acre source area. The Action Levels for groundwater are equivalent to the TCEQ TRRP Tier 1 PCLs for groundwater ingestion.

4.1 Soil Samples

As discussed above, the soil cores recovered from the borings were screened in the field for evidence of chemical impact such as chemical odors or PID readings. Elevated PID readings and/or hydrocarbon odors were detected in soil borings TSP-1, TSP-2, TSP-3, and TSP-5.

- Hydrocarbon odors and PID readings ranging from 377.8 to 3,150 parts per million (ppm) were detected in soil boring TSP-1, collected near the on-site UST field, at soil intervals located between 8 to 12 feet bgs.
- Hydrocarbon odors and PID readings ranging from 30.8 to 243.9 ppm were detected in soil boring TSP-2, collected near the on-site UST field, at soil intervals located between 4 to 12 feet bgs.
- PID readings ranging from 138.5 to 990.3 ppm were detected in soil boring TSP-3, collected near the former dispenser islands, at soil intervals located between 2 to 12 feet bgs.
- Hydrocarbon odors and PID readings ranging from 9.6 to 54.2 ppm were detected in soil boring TSP-5, collected near the former dispenser islands, at soil intervals located between 2 to 12 feet bgs.

VOC constituents were not detected in the soil samples at concentrations exceeding PST Action Levels with the exception of benzene, total xylenes and 1,2,4-trimethylbenzene detected in soil sample TSP-1 (10-12 feet bgs). Benzene and xylenes were detected in soil sample TSP-1 (10-12 feet bgs) at concentrations of 0.142 mg/kg (PST Action Level of 0.12 mg/kg) and 151 mg/kg (PST Action Level of 117 mg/kg), respectively. In addition, 1,2,4-trimethylbenzene was detected at a concentration of 122 mg/kg, above the TRRP Tier 1 PLC of 33 mg/kg.

TPH constituents were detected in the C₆ to C₁₂ carbon range from soil borings TSP-1 (10-12 feet bgs), TSP-2 (8-10 feet bgs), TSP-3 (2-4 feet bgs), TSP-3 (8-10 feet bgs), and TSP-5 (10-12 feet bgs) at concentrations ranging 31 to 200 milligrams per kilogram (mg/kg). TPH constituents in the C₁₂ to C₂₈ carbon ranges were detected from soil borings TSP-3 (2-4 feet bgs), TSP-3 (8-10 feet bgs) and TSP-5 (10-12 feet bgs) at concentrations ranging from 15.7 to 58.5 mg/kg. According to PST Program rules, there are no Action Levels for TPH; however, if TPH is detected above the C₁₂ carbon range at concentrations exceeding sample detection limits (SDLs), the sample must be analyzed for PAHs.

- Terracon analyzed soil sample TSP-3 (2-4 feet bgs – adjacent to the former dispenser islands) for PAHs. PAH constituents fluoranthene, fluorene, naphthalene, phenanthrene, and pyrene were detected in the soil sample at concentrations above the SDLs; however, concentrations of the detected PAH constituents were well below their representative PST Action Levels.

4.2 Groundwater Samples

VOC constituents were not detected in the groundwater samples at concentrations exceeding PST Action Levels with the exception of benzene, ethylbenzene, methyl tert-butyl ether (MTBE), 1,2,4-trimethylbenzene, 1,3,5- trimethylbenzene, and naphthalene.

- Benzene was detected in groundwater collected from temporary sampling points TSP-1 through TSP-5 and concentrations ranging from 0.0114 to 1.16 milligrams per liter (mg/L). These concentrations exceed the PST Action Level of 0.005 mg/L.
- Ethylbenzene was detected in groundwater from temporary sampling points TSP-2 and TSP-5 at concentrations of 1.44 mg/L and 1.94 mg/L, respectively. These concentrations exceed the PST Action Level of 0.7 mg/L.
- MTBE was detected in groundwater from temporary sampling points TSP-2 and TSP-5 at concentrations of 0.39 mg/L and 0.241 mg/L, respectively. These concentrations exceed the PST Action Level of 0.24 mg/L.
- Naphthalene was detected in groundwater from temporary sampling points TSP-2 and TSP-5 at concentrations of 0.728 mg/L and 1.54 mg/L, respectively. These concentrations exceed the TRRP Tier 1 PCL of 0.49 mg/L.
- 1,2,4-trimethylbenzene was detected in groundwater from temporary sampling point TSP-2 at a concentration of 2.71 mg/L, above the TRRP Tier 1 PCL of 0.83 mg/L.
- 1,3,5- trimethylbenzene was detected in groundwater from temporary sampling point TSP-2 at a concentration of 0.87 mg/L, above the TRRP Tier 1 PCL of 0.83 mg/L.

TPH constituents were detected in the C₆ to C₁₂ carbon range in groundwater from temporary sampling points TSP-1 through TSP-5 at concentrations ranging 5.79 to 64.3 mg/L. TPH constituents in the C₁₂ to C₂₈ carbon ranges were detected in groundwater from temporary sampling points TSP-1, TSP-2, TSP-3, and TSP-5 at concentrations ranging from 1.4 to 12.2 mg/L. According to PST Program rules, there are no Action Levels for TPH; however, if TPH is detected above the C₁₂ carbon range at concentrations exceeding SDLs, the sample must be analyzed for PAHs.

- Terracon analyzed groundwater collected from TSP-5 (adjacent to the former dispenser islands) for PAHs. The PAH constituent naphthalene was detected in the groundwater sample at a concentration of 0.0557 mg/L, well below the PST Action Level of 0.73 mg/L.

4.3 Data Review

The soil and groundwater analytical results were reviewed according to guidelines presented in the TCEQ Regulatory Guidance Review and Reporting of COC Concentration Data

(RG366/TRRP-13), revised May 2010. The Data Usability Summary (DUS) included as Appendix E contains the results of the data review for the soil and groundwater samples collected from 8626 Martin Luther King Jr. Boulevard on August 24, 2017. Based on the data review, the laboratory analytical data from the August 24, 2017 investigation activities are usable for making the project decisions with the qualifications presented in the DUS report.

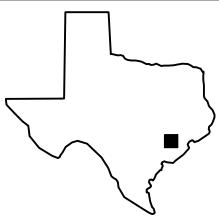
5.0 FINDINGS AND RECOMMENDATIONS

Based on the results of the Phase II ESA, Terracon provides the following findings and recommendations:

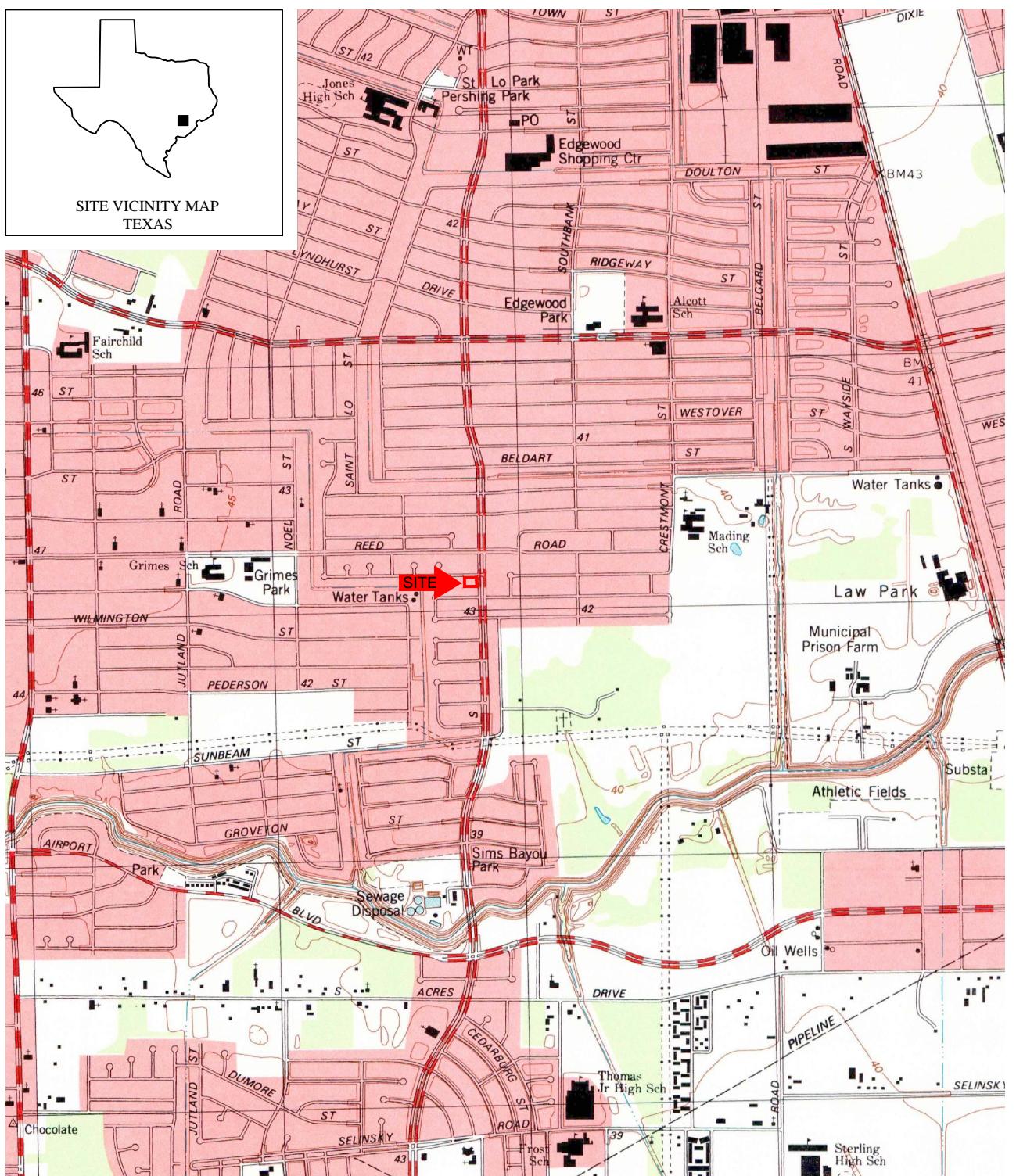
- Assessment activities performed by Terracon at the site in August 2017 indicate that in-situ soils in the vicinity of on-site UST field and groundwater beneath the site have been affected by VOCs from an apparent historic release(s) from the former UST system at concentrations exceeding PST Action Levels and/or TRRP Tier 1 PCLs. Terracon recommends that the COH provide the results of the Phase II ESA to the current property owner so that they can comply with the reporting requirements and additional assessment per PST Program rules under the Texas Administrative Code (TAC) Chapter 334. Such activities would include the preparation and submittal of a Release Determination Report (RDR) and completion of a risk-based site assessment (RBSA) using the criteria established under the TCEQ guidance document “*Risk-based Corrective Action for Leaking Petroleum Storage Tank (LPST) Sites (RG-523/PST-03, revised January 2017)*”.

EXHIBITS

EXHIBIT 1 – SITE VICINITY MAP
EXHIBIT 2 – SITE PLAN



SITE VICINITY MAP
TEXAS



USGS TOPOGRAPHIC QUADRANGLE MAP
Park Place, Texas

Terracon
Consulting Engineers & Scientists

DWG. No. 92177354 topo

Revised: 1995

APPROXIMATE SCALE 1"= 2000'



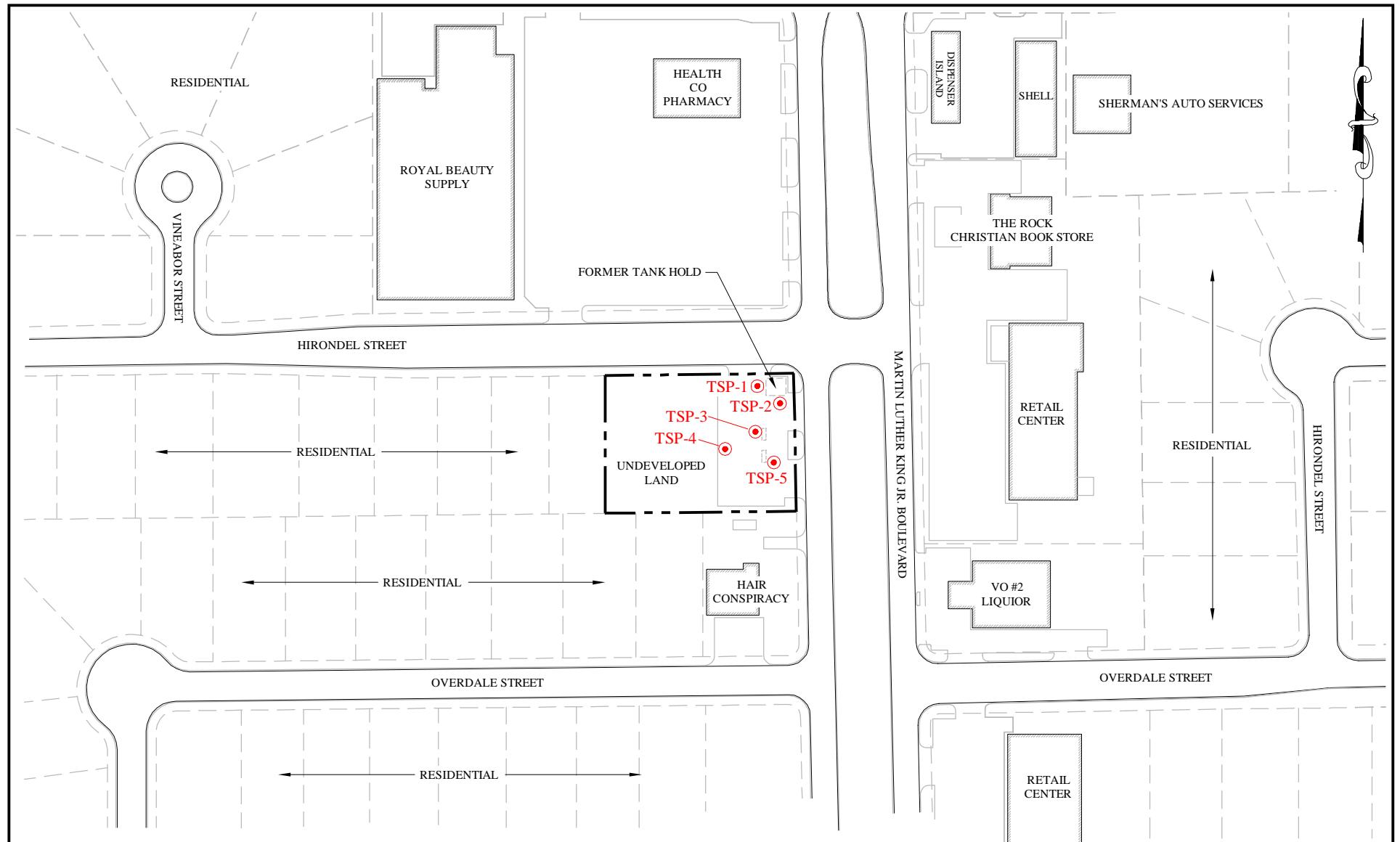
APPROXIMATELY 0.43 ACRES OF LAND - MLK
8626 MARTIN LUTHER KING JR. BOULEVARD
HOUSTON, TEXAS

TERRACON PROJECT NO. 92177354

Prepared By: REF

Approved By: SJP

EXHIBIT 1:
SITE VICINITY MAP



DWG. No. 92177354A Site plan

LEGEND		Terracon Consulting Engineers & Scientists	DRAWN BY: REF		EXHIBIT 2 SITE PLAN APPROXIMATELY 0.43 ACRES OF LAND - MLK 8626 MARTIN LUTHER KING JR. BOULEVARD HOUSTON, TEXAS
---	FORMER DISPENSER ISLANDS		CHECKED BY: SJP	SCALE: AS SHOWN	
●	TEMPORARY SAMPLING POINT		DATE: 8/25/2017		
APPROXIMATE SCALE 1" = 120'		TERRACON NO: 92177354A			

TABLES

TABLE 1 – SUMMARY OF SOIL ANALYTICAL RESULTS

TABLE 2 – SUMMARY OF SOIL PAH ANALYTICAL RESULTS

TABLE 3 – SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

TABLE 4 – SUMMARY OF GROUNDWATER PAH ANALYTICAL RESULTS

Table 1
Summary of Soil Analytical Results
 Approximately 0.43 Acre of Land - MLK
 8626 Martin Luther King Jr. Boulevard
 Houston, Harris County, Texas
 Project Number 92177354A
 (all concentrations in milligrams per kilogram)

Parameter	Method	PST Program Action Level	Sample Identifier										
			TSP-1 (4-6)	TSP-1 (10-12)	TSP-2 (4-6)	TSP-2 (8-10)	TSP-3 (2-4)	Duplicate	TSP-3 (8-10)	TSP-4 (1-2)	TSP-4 (12-14)	TSP-5 (2-4)	TSP-5 (10-12)
			8/24/2017	8/24/2017	8/24/2017	8/24/2017	8/24/2017	8/24/2017	8/24/2017	8/24/2017	8/24/2017	8/24/2017	8/24/2017
TPH (mg/kg)													
C6 - C12 Carbon Range	TCEQ TX1005	NE	<2.17	31	<2.54	35.3	200	61.3	56.1	<2.34	<2.36	<2.28	43.4
C12 - C28 Carbon Range	TCEQ TX1005	>MDL	<1.49	<1.55	<1.74	<3.11	58.5	21.3	18.6	<1.61	<1.61	<1.57	15.7
C28 - C35 Carbon Range	TCEQ TX1005	>MDL	<0.623	<0.648	<0.729	<1.30	<0.550	<0.736	<0.682	<0.672	<0.676	<0.655	<0.603
Volatile Organic Compounds (VOCs) (mg/kg)													
Benzene	EPA 8260B	0.12	0.000477	0.142	0.00181	0.0922	<0.00403	<0.00330	0.0108	<0.000173	0.00760	0.00115	0.0325
Toluene	EPA 8260B	39.1	<0.000901	0.404	<0.00117	<0.0242	<0.0257	<0.0211	<0.0212	<0.00110	<0.000967	<0.000778	<0.0203
Ethylbenzene	EPA 8260B	36.8	<0.000387	25.7	<0.000503	0.142	0.0586	0.0423	0.191	<0.000473	<0.000415	<0.000334	0.325
Xylenes	EPA 8260B	117	<0.000450	151	<0.000585	0.101	<0.0129	0.0438	0.0282	<0.000551	<0.000483	<0.000389	0.0329
sec-Butylbenzene	EPA 8260B	85 ^(a)	<0.000442	1.75	0.000784	0.101	0.253	0.289	0.2	<0.000540	<0.000474	<0.000382	0.0594
n-Butylbenzene	EPA 8260B	150 ^(a)	<0.00180	4.89	<0.00234	0.37	1.23	1.29	0.858	<0.00220	<0.00193	<0.00156	0.255
p-Cymene (isopropyltoluene)	EPA 8260B	230 ^(a)	<0.000379	0.970	<0.000492	<0.0102	0.148	0.116	<0.00893	<0.000463	<0.000406	<0.000327	0.073
Cumene (Isopropylbenzene)	EPA 8260B	350 ^(a)	<0.000151	4.05	0.00327	0.16	0.248	0.196	0.368	<0.000184	<0.000162	0.00205	0.132
MTBE	EPA 8260B	2.56	0.0408	<0.0974	0.336	1.26	<0.0257	<0.0211	<0.0212	<0.00110	0.000996	<0.000778	<0.0203
Naphthalene	EPA 8260B	31 ^(a)	<0.00180	18.4	<0.00234	0.316	0.811	0.381	0.644	<0.00220	<0.00193	<0.00156	0.361
n-Propylbenzene	EPA 8260B	45 ^(a)	<0.000161	14.9	0.00268	0.62	1.29	1.03	2.04	<0.000197	<0.000173	0.00107	0.576
1,2,4-Trimethylbenzene	EPA 8260B	33 ^(a)	<0.000102	122	<0.000132	0.207	2.22	0.423	0.0276	<0.000124	<0.000109	<0.0000879	0.0321
1,3,5-Trimethylbenzene	EPA 8260B	36 ^(a)	<0.000358	32.2	<0.000465	0.0477	<0.0102	0.0406	0.00934	<0.000438	<0.000384	<0.000309	<0.00808

Notes

1) Soil samples were analyzed for TPH by TX 1005 and VOCs by EPA 8260B. Only chemicals of concern plus BTEX were reported in this table.

2) **BOLD** Font = Indicates result exceeds PST Program Action Level or TRRP Tier 1 PCL.

TPH - total petroleum hydrocarbons

MDL - method detection limit

VOC - volatile organic compound

SDL - sample detection limit

BTEX - benzene, toluene, ethylbenzene, xylene

PCL - protective concentration level

TCEQ - Texas Commission on Environmental Quality

< - not detected at concentrations above the indicated SDL

TRRP - Texas Risk Reduction Program

J - constituent detected at a concentration between the SDL and the method quantitation limit.

EPA - Environmental Protection Agency

C₆ - C₁₂ Carbon Range = Gasoline Range Hydrocarbons

PST - petroleum storage tank

C₁₂ - C₂₈ Carbon Range = Diesel Range Hydrocarbons

NE- not established under TCEQ PST Program

C₂₈ - C₃₅ Carbon Range = Oil Range Hydrocarbons

NA - not analyzed

(a) - based on the TRRP critical Tier 1 PCL for a residential site with a 0.5-acre source area

Table 2
Summary of Soil PAH Analytical Results

Approximately 0.43 Acre of Land - MLK
 8626 Martin Luther King Jr. Boulevard
 Houston, Harris County, Texas
 Project Number 92177354A
 (all concentrations in milligrams per kilogram)

Analyte	Plan A Target Concentration	Sample Identifier
		TSP-3 (2-4)
PAH (EPA 8270C)		
Fluoranthene	25.5	0.00130
Fluorene	30.2	0.00374
Naphthalene	99.7	0.0408
Phenanthrene	28.2	0.00242
Pyrene	10.3	0.00204

Notes

1) Soil sample TSP-3 (2-4) was additionally analyzed for PAH by EPA 8270C.

Only chemicals of concern were reported in this table.

2) **BOLD** Font = Indicates result exceeds Plan A Target Concentration.

PAH - polycyclic aromatic hydrocarbons

EPA- Environmental Protection Agency

Action Level - Plan A Target Concentration for Category II Groundwater Protective Soil.

Table 3
Summary of Groundwater Analytical Results

Approximately 0.43 Acre of Land - MLK

8626 Martin Luther King Jr. Boulevard

Houston, Harris County, Texas

Project Number 92177354A

(all concentrations in milligrams per liter)

Parameter	Method	PST Program Action Level	Sample Identifier					
			TSP-1	TSP-2	TSP-3	TSP-4	TSP-5	Duplicate
			8/24/2017	8/24/2017	8/24/2017	8/24/2017	8/24/2017	8/24/2017
Total Petroleum Hydrocarbons (TPH) (mg/L)								
C6 - C12 Carbon Range	TCEQ TX1005	NE	25.4	64.3	14.5	5.79	54	5.8
C12 - C28 Carbon Range	TCEQ TX1005	>MDL	1.99	<0.318	1.4	<0.314	12.2	<0.241
C28 - C35 Carbon Range	TCEQ TX1005	>MDL	<0.124	1.7	<0.0903	<0.193	<0.140	<0.149
Volatile Organic Compounds (VOCs) (mg/L)								
Benzene	EPA 8260B	0.005	0.0612	0.14	0.0114	0.0395	1.16	0.814
Toluene	EPA 8260B	1.0	0.0256	0.155	0.0107	0.00874	0.0306	0.022
Ethylbenzene	EPA 8260B	0.7	0.161	1.44	0.168	0.115	1.93	1.94
Xylenes	EPA 8260B	10	0.572	7.4	0.905	0.626	0.965	1.21
n-Butylbenzene	EPA 8260B	1.2 ^(a)	<0.0200	0.0486	0.0763	<0.00400	0.066	0.0938
sec-Butylbenzene	EPA 8260B	0.98 ^(a)	0.0051	0.0307	0.0154	0.00718	0.0228	0.0264
p-Cymene (Isopropyltoluene)	EPA 8260B	2.4 ^(a)	0.004	0.0148	0.0071	0.00348	0.0058	0.0054
Cumene (Isopropylbenzene)	EPA 8260B	2.4 ^(a)	0.0103	0.111	0.0285	0.0169	0.125	0.138
MTBE	EPA 8260B	0.24	0.175	0.39	0.0267	0.0762	0.241	0.194
Naphthalene	EPA 8260B	0.49 ^(a)	0.079	0.728	0.358	0.0717	0.959	1.54
n-Propylbenzene	EPA 8260B	0.98 ^(a)	0.0366	0.447	0.125	0.0748	0.455	0.553
1,2,4-Trimethylbenzene	EPA 8260B	0.83 ^(a)	0.233	2.71	0.747	0.435	0.672	0.8
1,3,5-Trimethylbenzene	EPA 8260B	0.83 ^(a)	0.0627	0.87	0.245	0.15	0.121	0.121

Notes

1) All groundwater samples were analyzed for TPH by TX 1005 and VOCs by EPA 8260B. Only chemicals of concern plus BTEX were reported in this table.

2) **BOLD** Font = Indicates result exceeds PST Program Action Level or TRRP Tier 1 PCL.

TPH - total petroleum hydrocarbons

MDL - method detection limit

VOC - volatile organic compound

SDL - sample detection limit

BTEX - benzene, toluene, ethylbenzene, xylene

PCL - protective concentration level

TCEQ - Texas Commission on Environmental Quality

< - not detected at concentrations above the indicated SDL

TRRP - Texas Risk Reduction Program

J - constituent detected at a concentration between the SDL and the method quantitation limit.

EPA - Environmental Protection Agency

C₆ - C₁₂ Carbon Range = Gasoline Range Hydrocarbons

PST - petroleum storage tank

C₁₂ - C₂₈ Carbon Range = Diesel Range Hydrocarbons

NE - not established under TCEQ PST Program

C₂₈ - C₃₅ Carbon Range = Oil Range Hydrocarbons

NA - not analyzed

(a) - based on the TRRP critical Tier 1 PCL for groundwater ingestion for a residential site

Table 4
Summary of Groundwater PAH Analytical Results

Approximately 0.43 Acre of Land - MLK

8626 Martin Luther King Jr. Boulevard

Houston, Harris County, Texas

Project Number 92177354A

(all concentrations in milligrams per liter)

Analyte	Plan A Target Concentration	Sample Identifier
		TSP-5
PAH (EPA 8270C)		
Naphthalene	0.73	0.0557

Notes

1) Groundwater sample TSP-5 was additionally analyzed for PAH by EPA 8270C.

Only chemicals of concern were reported in this table.

2) **BOLD** Font = Indicates result exceeds Plan A Target Concentration for Category II Groundwater.

PAH - polycyclic aromatic hydrocarbons

EPA- Environmental Protection Agency

Action Level - Plan A Target Concentration for Category II Groundwater Protective Soil

APPENDIX A

PHOTO LOG



Photo 1 View of TSP-1 drilling location facing north.



Photo 2 View of TSP-2 drilling location facing north.



Photo 3 View of TSP-3 drilling location facing west.



Photo 4 View of TSP-4 drilling location facing west.



Photo 5 View of TSP-5 drilling location facing south.



Photo 6 View of temporary groundwater sampling point.

APPENDIX B

DAILY FIELD REPORTS AND WASTE MANIFESTS

DAILY FIELD REPORTS



11555 Clay Road, Suite 100
Houston, Texas 77043 (713) 690-8989

DAILY FIELD REPORT

Project No. 92177354A
Project Name: 0.43 Acres of Land
Client: City of Houston
Field Representative: Sheridan Forte
Weather: Sunny
Start: 0730 hrs. End: 1900 hrs.

Page 1 of 1
Date 3/24/17
Project Manager: Gregg Pawlak

Total hrs. 11.5

Drum ID.	Description of Contents & Quantity	Location
	1 drum containing soil cuttings - behind trees to the west	
	1DW sample collected @ 1400	

Time	Description of Work Performed
0730	leave for site
0900	meet Jason Padilla w/ Advanced Drilling onsite, tailgate safety meeting begin drilling TSP-1
1018	TSP-1 (4-6) collected
1025	TSP-1 (10-12) collected
	begin drilling TSP-2
1120	TSP-2 (4-6) collected
1130	TSP-2 (8-10) collected (MS/MSD) begin drilling TSP-3
1200	TSP-3 (2-4) collected (Duplicate)
1210	TSP-3 (8-10) collected begin drilling TSP-4
1246	TSP-4 (1-2) collected
1300	TSP-4 (12-14) collected begin drilling TSP-5
1320	TSP-5 (2-4) collected
1350	TSP-5 (10-12) collected begin groundwater sample collection from TSPs wells did not produce much water, had to wait for recharge on all 5 TSPs Very silty and clogged the tubing multiple times - had to replace tubing
1430	TSP-1 groundwater sample collected
1450	Equipment Blank collected
1500	TSP-2 groundwater sample collected (MS/MSD)
1600	TSP-4 groundwater sample collected using disposable bailer
1700	TSP-5 Groundwater sample collected using disposable bailer (Duplicate)
1730	TSP-3 groundwater sample collected using disposable bailer
1745	leave site
1900	end travel

WASTE MANIFESTS



May 3, 2018

Mr. Gregg Pawlak
Terracon Consultants, Inc.
11555 Clay Road
Houston, Texas 77043
Email: gregg.pawlak@terracon.com

**Subject: Dry Run -
Drum Scheduled Pick-up for Transportation and Disposal
City of Houston
0.43 Acres of Land – 8626 Martin Luther King Jr. Drive
Houston, Texas**

Dear Mr. Pawlak;

IKON Environmental Solutions, LP (IKON) was contracted, by Terracon, to Profile, Transport and Dispose one (1) drum of Non-Hazardous Class 2 soil material. Upon arrival at the site (referenced above), on March 6, 2018, IKON was unable to locate this 1 drum. We surveyed the entire site, and to no avail, we were unable to locate the drum. We subsequently notified your office the drum was missing. Therefore, we have a profiling fee and pickup/demerge charges associated with this dry run.

If you have any questions, please contact us at 281-766-4566.

Sincerely,

Debbie Currier

APPENDIX C

BORING LOGS AND STATE WELL REPORTS

SOIL BORING / MONITOR WELL LOG

PROJECT: Approximately 0.43 Acres of Land - MLK
 PROJECT NUMBER: 92177354A
 CLIENT: City of Houston
 BORING / WELL NUMBER: TSP-1
 TOTAL DEPTH: 16.0'
 SURFACE ELEVATION: Not Determined
 SUPERVISOR: Sheraden Porter

DRILLING COMPANY: Advanced Drilling Systems
 DRILLER: Jason Padilla
 DRILLING METHOD: DPT
 BORE HOLE DIAMETER: 2"
 SCREEN: Diam. 1" Length 10' Slot Size 0.01"
 CASING: Diam. 1" Length 6' Type PVC
 DATE DRILLED: 8-24-17

PAGE 1 of 1

DEPTH (FT)	SOIL SYMBOL	WELL CONSTRUCTION	PID (PPM)	SAMPLE TYPE	LABORATORY SAMPLE DEPTH	PERCENT RECOVERY, %	DESCRIPTION OF STRATUM		DEPTH (FT)
							Name (Sym.), Color, Water Content, Plasticity, Density, Gradation, Grain Size, Observations		
0			6.9				CONCRETE		0
			8.4				SANDY CLAY - dark gray, moist, medium plasticity, medium stiff		
5			8.1				- red and light gray		5
			8.0				- medium plasticity, manganese		
			377.8				CLAY - light gray and red, moist, high plasticity, calcareous concretions		8
10			3150				SANDY CLAY - low plasticity, very moist, soft, hydrocarbon odor	10	10
							SAND - medium brown, saturated, fine-grained, hydrocarbon odor	12	
15							CLAY - red and light gray, moist, high plasticity, stiff,	14	14
							Boring terminated at 16 feet bgs.	16	15
20									20
25									25
REMARKS: This log should not be used separately from the original report.									

SOIL BORING / MONITOR WELL LOG

PROJECT: Approximately 0.43 Acres of Land - MLK
 PROJECT NUMBER: 92177354A
 CLIENT: City of Houston
 BORING / WELL NUMBER: TSP-2
 TOTAL DEPTH: 16.0'
 SURFACE ELEVATION: Not Determined
 SUPERVISOR: Sheraden Porter

DRILLING COMPANY: Advanced Drilling Systems
 DRILLER: Jason Padilla
 DRILLING METHOD: DPT
 BORE HOLE DIAMETER: 2"
 SCREEN: Diam. 1" Length 10' Slot Size 0.01"
 CASING: Diam. 1" Length 6' Type PVC
 DATE DRILLED: 8-24-17

PAGE 1 of 1

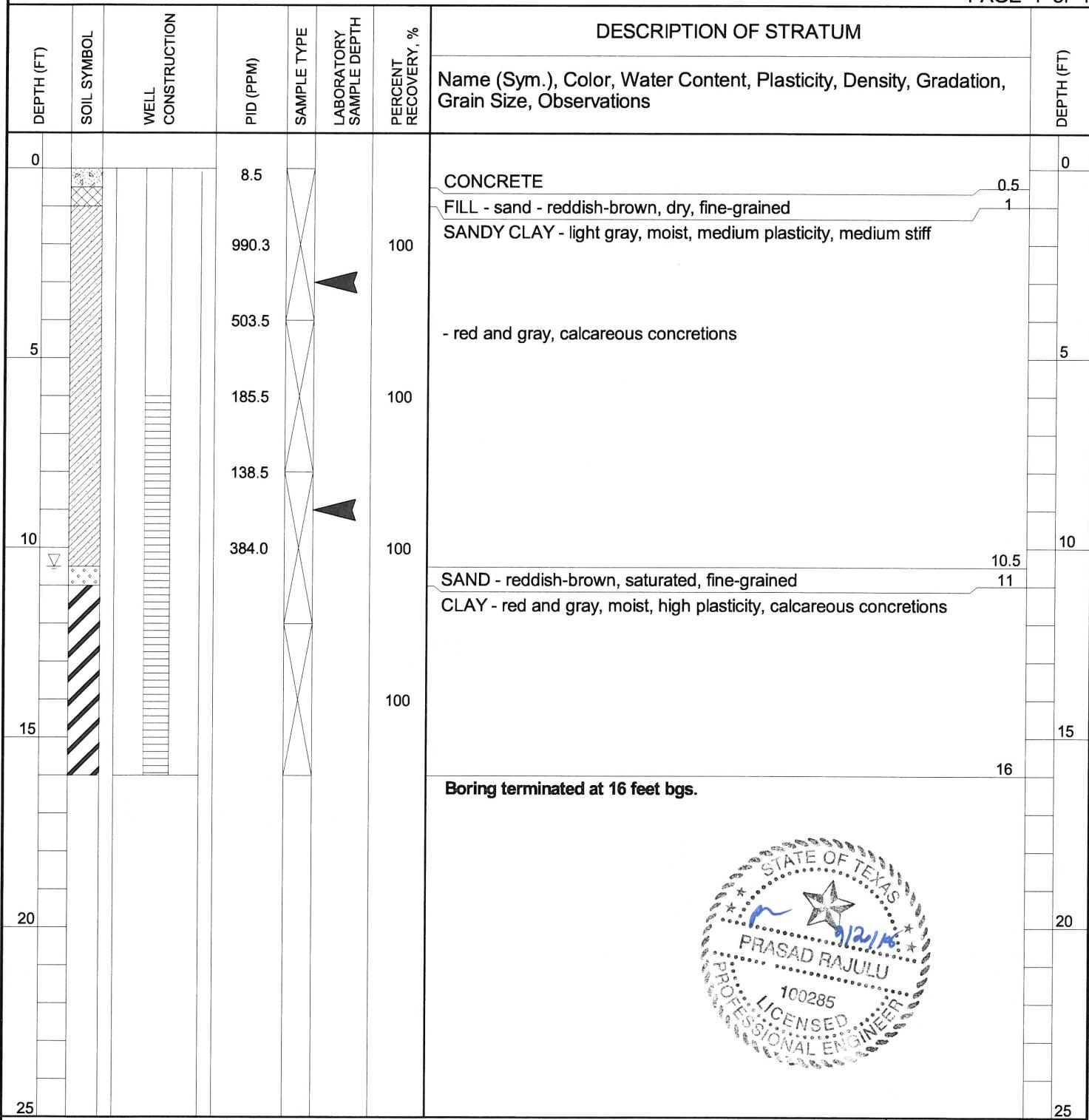
DEPTH (FT)	SOIL SYMBOL	WELL CONSTRUCTION	PID (PPM)	SAMPLE TYPE	LABORATORY SAMPLE DEPTH	PERCENT RECOVERY, %	DESCRIPTION OF STRATUM		DEPTH (FT)
							Name (Sym.), Color, Water Content, Plasticity, Density, Gradation, Grain Size, Observations		
0			14.2			100	CONCRETE		0
			37.9			100	SANDY CLAY - dark gray, moist, medium plasticity, medium stiff - light gray, iron nodules		
5			30.8			100	- greenish-gray, hydrocarbon odor, calcareous concretions		5
			42.1			100			
			243.9			100	CLAY - red and greenish-gray, moist, high plasticity, calcareous concretions		8
10			209.8			100	SANDY CLAY - greenish-gray, moist, low plasticity, soft, hydrocarbon odor,		10
							SAND - light gray and tan, saturated, fine-grained, hydrocarbon odor		12
									14
15						100	CLAY - red, moist, high plasticity, stiff		15.5
							SAND - tan, dry, fine-grained		16
							Boring terminated at 16 feet bgs.		
20									20
25									25
REMARKS: This log should not be used separately from the original report.									

SOIL BORING / MONITOR WELL LOG

PROJECT: Approximately 0.43 Acres of Land - MLK
 PROJECT NUMBER: 92177354A
 CLIENT: City of Houston
 BORING / WELL NUMBER: TSP-3
 TOTAL DEPTH: 16.0'
 SURFACE ELEVATION: Not Determined
 SUPERVISOR: Sheraden Porter

DRILLING COMPANY: Advanced Drilling Systems
 DRILLER: Jason Padilla
 DRILLING METHOD: DPT
 BORE HOLE DIAMETER: 2"
 SCREEN: Diam. 1" Length 10' Slot Size 0.01"
 CASING: Diam. 1" Length 6' Type PVC
 DATE DRILLED: 8-24-17

PAGE 1 of 1



REMARKS:

This log should not be used separately from the original report.



SOIL BORING / MONITOR WELL LOG

PROJECT: Approximately 0.43 Acres of Land - MLK
 PROJECT NUMBER: 92177354A
 CLIENT: City of Houston
 BORING / WELL NUMBER: TSP-4
 TOTAL DEPTH: 16.0'
 SURFACE ELEVATION: Not Determined
 SUPERVISOR: Sheraden Porter

DRILLING COMPANY: Advanced Drilling Systems
 DRILLER: Jason Padilla
 DRILLING METHOD: DPT
 BORE HOLE DIAMETER: 2"
 SCREEN: Diam. 1" Length 10' Slot Size 0.01"
 CASING: Diam. 1" Length 6' Type PVC
 DATE DRILLED: 8-24-17

PAGE 1 of 1

DEPTH (FT)	SOIL SYMBOL	WELL CONSTRUCTION	PID (PPM)	SAMPLE TYPE	LABORATORY SAMPLE DEPTH	PERCENT RECOVERY, %	DESCRIPTION OF STRATUM		DEPTH (FT)
							Name (Sym.), Color, Water Content, Plasticity, Density, Gradation, Grain Size, Observations		
0			7.7			100	CONCRETE		0
5			5.8			100	SANDY CLAY - dark red and black, dry, low plasticity, stiff - light gray		5
10			6.1			100	- red and light gray, moist, medium plasticity		10
15			6.2			100	- manganese, calcareous concretions		15
20			4.6			100			20
25			4.9			100			25
			6.3			100	CLAYEY SAND - tan, saturated		
							CLAY - red and light gray, moist, high plasticity, stiff, calcareous concretions		
							Boring terminated at 16 feet bgs.		



REMARKS:

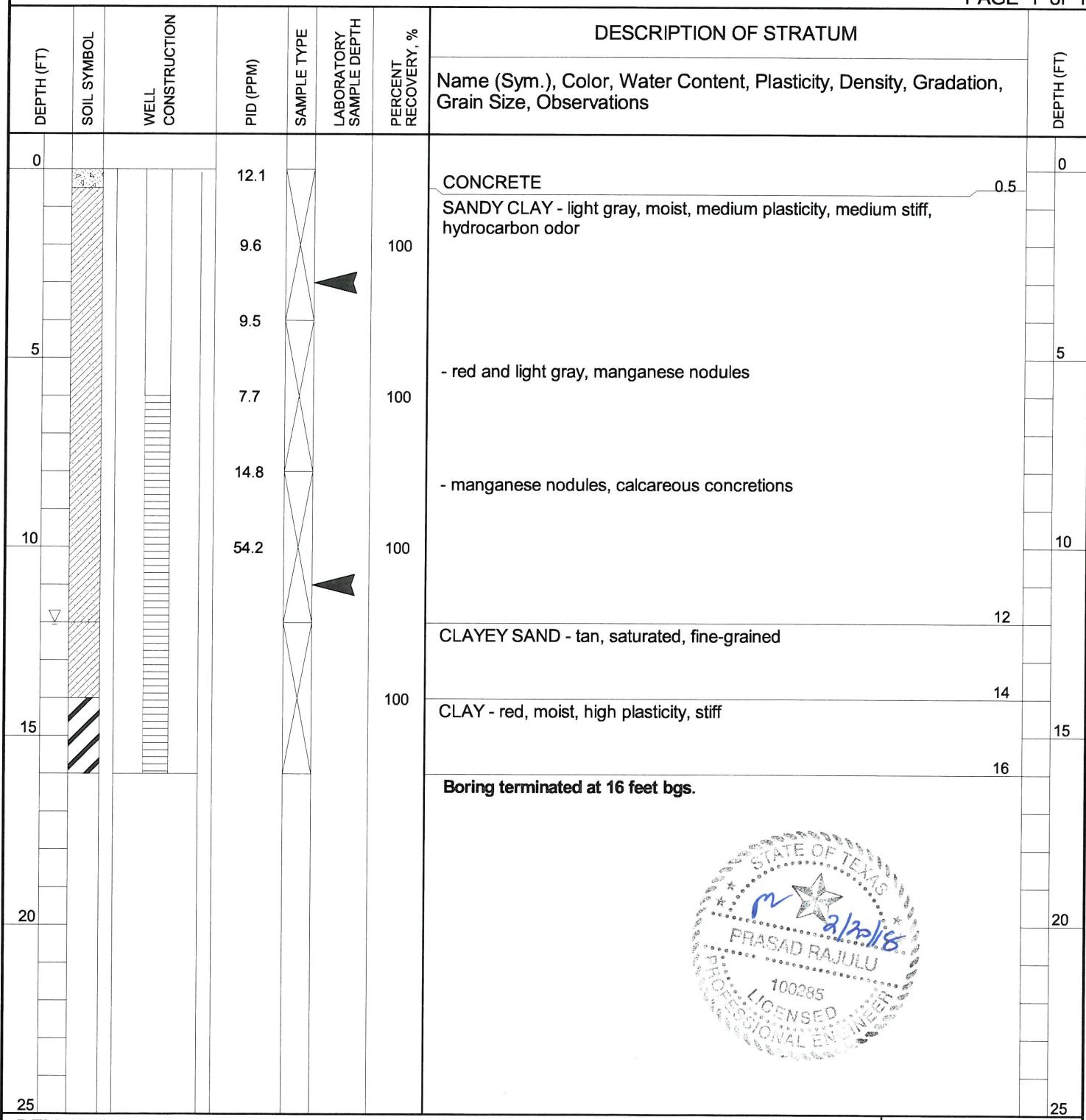
This log should not be used separately from the original report.

SOIL BORING / MONITOR WELL LOG

PROJECT: Approximately 0.43 Acres of Land - MLK
 PROJECT NUMBER: 92177354A
 CLIENT: City of Houston
 BORING / WELL NUMBER: TSP-5
 TOTAL DEPTH: 16.0'
 SURFACE ELEVATION: Not Determined
 SUPERVISOR: Sheraden Porter

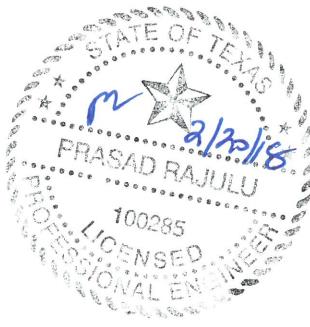
DRILLING COMPANY: Advanced Drilling Systems
 DRILLER: Jason Padilla
 DRILLING METHOD: DPT
 BORE HOLE DIAMETER: 2"
 SCREEN: Diam. 1" Length 10' Slot Size 0.01"
 CASING: Diam. 1" Length 6' Type PVC
 DATE DRILLED: 8-24-17

PAGE 1 of 1



REMARKS:

This log should not be used separately from the original report.



STATE OF TEXAS WELL REPORT for Tracking #459823

Owner:	Ms. Jennifer M. Clancey, City of Houston, Public Works & Engineering	Owner Well #:	TSP-1
Address:	1002 Washington Ave. Houston, TX 77002	Grid #:	65-22-7
Well Location:	8626 Martin Luther King Junior Blvd. Houston, TX 77033	Latitude:	29° 39' 26.92" N
Well County:	Harris	Longitude:	095° 20' 13" W
Plugged Within 48 Hours			

****This well has been plugged****

Plugging Report Tracking #171331

Type of Work: New Well	Proposed Use: Monitor
-------------------------------	------------------------------

Drilling Start Date: **8/24/2017** Drilling End Date: **8/24/2017**

Borehole:	Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
	2	0	16

Drilling Method: **Direct Push**

Borehole Completion: **Screened**

Annular Seal Data:	Top Depth (ft.)	Bottom Depth (ft.)	Description (number of sacks & material)
	0	16	Bentonite 2 Bags/Sacks

Seal Method: **Poured**

Distance to Property Line (ft.): **No Data**

Sealed By: **Driller**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: Alternative Procedure Used	Surface Completion by Driller
---	--------------------------------------

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Plug Information:	Description (number of sacks & material)	Top Depth (ft.)	Bottom Depth (ft.)
	Bentonite	0	16

Water Quality:	Strata Depth (ft.)	Water Type
	No Data	No Data

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

The driller did certify that while drilling, deepening or otherwise altering the above described well, injurious water or constituents was encountered and the landowner or person having the well drilled was informed that such well must be completed or plugged in such a manner as to avoid injury or pollution.

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Advanced Drilling Systems**

**904 W. Tidwell, Rd.
Houston, TX 77091**

Driller Name: **M. Firouzbakht** License Number: **56052**

Apprentice Name: **Jason Padilla** Apprentice Number: **59194**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

Top (ft.)	Bottom (ft.)	Description
0.5	0.5	Concrete
0.5	8	SANDY CLAY - dark gray, moist, medium plasticity, medium stiff - red and light gray - medium plasticity, manganese
8	10	CLAY - light gray and red, moist, high plasticity, calcareous concretions
10	12	SANDY CLAY - low plasticity, very moist, soft
12	14	SAND - medium brown, saturated, fine-grained
14	16	CLAY - red and light gray, moist, high plasticity, stiff,

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
1	Screen	New Plastic (PVC)	40	0	6
1	Riser	New Plastic (PVC)	40	6	16

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS PLUGGING REPORT for Tracking #171331

Owner:	Ms. Jennifer M. Clancey, City of Houston, Public Works & Engineering	Owner Well #:	TSP-1
Address:	1002 Washington Ave. Houston, TX 77002	Grid #:	65-22-7
Well Location:	8626 Martin Luther King Junior Blvd. Houston, TX 77033	Latitude:	29° 39' 26.92" N
Well County:	Harris	Longitude:	095° 20' 13" W
		Elevation:	No Data
Well Type:	Monitor		

Drilling Information

Company:	Advanced Drilling Systems	Date Drilled:	8/24/2017
Driller:	Mahmoud Firouzbakht	License Number:	56052

Well Report Tracking #459823

Borehole:	Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
	2	0	16

Plugging Information

Date Plugged:	8/24/2017	Plugger:	Jason Padilla
Plug Method:	Pour in 3/8 bentonite chips when standing water in well is less than 100 feet depth, cement top 2 feet		

Casing Left in Well:

Plug(s) Placed in Well:

No Data	Top (ft.)	Bottom (ft.)	Description (number of sacks & material)
	0	16	Bentonite 2 Bags/Sacks

Certification Data: The driller certified that the driller plugged this well (or the well was plugged under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the reports(s) being returned for completion and resubmittal.

Company Information: **Advanced Drilling Systems**

**904 W. Tidwell, Rd.
Houston, TX 77091**

Driller Name: **M. Firouzbakht** License Number: **56052**

Apprentice Name: **Jason Padilla** Apprentice Number: **59194**

Comments: **No Data**

STATE OF TEXAS WELL REPORT for Tracking #459827

Owner:	Ms. Jennifer M. Clancey, City of Houston, Public Works & Engineering	Owner Well #:	TSP-2
Address:	1002 Washington Ave. Houston, TX 77002	Grid #:	65-22-7
Well Location:	8626 Martin Luther King Junior Blvd. Houston, TX 77033	Latitude:	29° 39' 26.92" N
Well County:	Harris	Longitude:	095° 20' 13" W
Plugged Within 48 Hours			

****This well has been plugged****

Plugging Report Tracking #171332

Type of Work: New Well	Proposed Use: Monitor
-------------------------------	------------------------------

Drilling Start Date: **8/24/2017** Drilling End Date: **8/24/2017**

Borehole:	Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
	2	0	16

Drilling Method: **Direct Push**

Borehole Completion: **Screened**

Annular Seal Data:	Top Depth (ft.)	Bottom Depth (ft.)	Description (number of sacks & material)
	0	16	Bentonite 2 Bags/Sacks

Seal Method: **Poured**

Distance to Property Line (ft.): **No Data**

Sealed By: **Driller**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: Alternative Procedure Used	Surface Completion by Driller
---	--------------------------------------

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Plug Information:	Description (number of sacks & material)	Top Depth (ft.)	Bottom Depth (ft.)
	Bentonite	0	16

Water Quality:	Strata Depth (ft.)	Water Type
	No Data	No Data

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

The driller did certify that while drilling, deepening or otherwise altering the above described well, injurious water or constituents was encountered and the landowner or person having the well drilled was informed that such well must be completed or plugged in such a manner as to avoid injury or pollution.

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Advanced Drilling Systems**

**904 W. Tidwell, Rd.
Houston, TX 77091**

Driller Name: **M. Firouzbakht** License Number: **56052**

Apprentice Name: **Jason Padilla** Apprentice Number: **59194**

Comments: **No Data**

Lithology:

DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0.5	0.5	Concrete
0.5	8	SANDY CLAY - dark gray, moist, medium plasticity, medium stiff - light gray, iron nodules - greenish-gray, calcareous concretions
8	10	CLAY - red and greenish-gray, moist, high plasticity, calcareous concretions
10	12	SANDY CLAY - greenish-gray, moist, low plasticity, soft
12	14	SAND - light gray and tan, saturated, fine-grained
14	15.5	CLAY - red, moist, high plasticity, stiff
15.5	16	SAND - tan, dry, fine-grained

Casing: BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
1	Screen	New Plastic (PVC)	40	0	6
1	Riser	New Plastic (PVC)	40	6	16

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS PLUGGING REPORT for Tracking #171332

Owner:	Ms. Jennifer M. Clancey, City of Houston, Public Works & Engineering	Owner Well #:	TSP-2
Address:	1002 Washington Ave. Houston, TX 77002	Grid #:	65-22-7
Well Location:	8626 Martin Luther King Junior Blvd. Houston, TX 77033	Latitude:	29° 39' 26.92" N
Well County:	Harris	Longitude:	095° 20' 13" W
		Elevation:	No Data
Well Type:	Monitor		

Drilling Information

Company:	Advanced Drilling Systems	Date Drilled:	8/24/2017
Driller:	Mahmoud Firouzbakht	License Number:	56052

Well Report Tracking #459827

Borehole:	Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
	2	0	16

Plugging Information

Date Plugged:	8/24/2017	Plugger:	Jason Padilla
Plug Method:	Pour in 3/8 bentonite chips when standing water in well is less than 100 feet depth, cement top 2 feet		

Casing Left in Well:

Plug(s) Placed in Well:

No Data	Top (ft.)	Bottom (ft.)	Description (number of sacks & material)
	0	16	Bentonite 2 Bags/Sacks

Certification Data: The driller certified that the driller plugged this well (or the well was plugged under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the reports(s) being returned for completion and resubmittal.

Company Information: **Advanced Drilling Systems**

**904 W. Tidwell, Rd.
Houston, TX 77091**

Driller Name: **M. Firouzbakht** License Number: **56052**

Apprentice Name: **Jason Padilla** Apprentice Number: **59194**

Comments: **No Data**

STATE OF TEXAS WELL REPORT for Tracking #459835

Owner: **Ms. Jennifer M. Clancey, City of Houston, Public Works & Engineering** Owner Well #: **TSP-3**
 Address: **1002 Washington Ave. Houston, TX 77002** Grid #: **65-22-7**
 Well Location: **8626 Martin Luther King Junior Blvd. Houston, TX 77033** Latitude: **29° 39' 26.92" N**
 Well County: **Harris** Longitude: **095° 20' 13" W**
Elevation: No Data
****Plugged Within 48 Hours****

****This well has been plugged****

Plugging Report Tracking #171333

Type of Work: **New Well** Proposed Use: **Monitor**

Drilling Start Date: **8/24/2017** Drilling End Date: **8/24/2017**

Borehole:	Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
	2	0	16

Drilling Method: **Direct Push**

Borehole Completion: **Screened**

Annular Seal Data:	Top Depth (ft.)	Bottom Depth (ft.)	Description (number of sacks & material)
	0	4	Bentonite 1 Bags/Sacks
	4	16	Sand 2 Bags/Sacks

Seal Method: **Poured**

Distance to Property Line (ft.): **No Data**

Sealed By: **Driller**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Alternative Procedure Used** Surface Completion by Driller

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Plug Information:	Description (number of sacks & material)	Top Depth (ft.)	Bottom Depth (ft.)
	Bentonite	0	16

Water Quality:	Strata Depth (ft.)	Water Type
	No Data	No Data

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

The driller did certify that while drilling, deepening or otherwise altering the above described well, injurious water or constituents was encountered and the landowner or person having the well drilled was informed that such well must be completed or plugged in such a manner as to avoid injury or pollution.

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Advanced Drilling Systems**

**904 W. Tidwell, Rd.
Houston, TX 77091**

Driller Name: **M. Firouzbakht** License Number: **56052**

Apprentice Name: **Jason Padilla** Apprentice Number: **59194**

Comments: **No Data**

Lithology:

DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0.5	0.5	Concrete
0.5	1	FILL - sand - reddish-brown, dry, fine-grained
1	10.5	SANDY CLAY - light gray, moist, medium plasticity, medium stiff - red and gray, calcareous concretions
10.5	11	SAND - reddish-brown, saturated, fine-grained
11	16	CLAY - red and gray, moist, high plasticity, calcareous concretions

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
1	Riser	New Plastic (PVC)	40	0	6
1	Screen	New Plastic (PVC)	40	6	16

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS PLUGGING REPORT for Tracking #171333

Owner:	Ms. Jennifer M. Clancey, City of Houston, Public Works & Engineering	Owner Well #:	TSP-3
Address:	1002 Washington Ave. Houston, TX 77002	Grid #:	65-22-7
Well Location:	8626 Martin Luther King Junior Blvd. Houston, TX 77033	Latitude:	29° 39' 26.92" N
Well County:	Harris	Longitude:	095° 20' 13" W
		Elevation:	No Data
Well Type:	Monitor		

Drilling Information

Company:	Advanced Drilling Systems	Date Drilled:	8/24/2017
Driller:	Mahmoud Firouzbakht	License Number:	56052

Well Report Tracking #459835

Borehole:	Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
	2	0	16

Plugging Information

Date Plugged:	8/24/2017	Plugger:	Jason Padilla
Plug Method:	Pour in 3/8 bentonite chips when standing water in well is less than 100 feet depth, cement top 2 feet		

Casing Left in Well:

Plug(s) Placed in Well:

No Data	Top (ft.)	Bottom (ft.)	Description (number of sacks & material)
	0	16	Bentonite 1 Bags/Sacks

Certification Data: The driller certified that the driller plugged this well (or the well was plugged under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the reports(s) being returned for completion and resubmittal.

Company Information: **Advanced Drilling Systems**

**904 W. Tidwell, Rd.
Houston, TX 77091**

Driller Name: **M. Firouzbakht** License Number: **56052**

Apprentice Name: **Jason Padilla** Apprentice Number: **59194**

Comments: **No Data**

STATE OF TEXAS WELL REPORT for Tracking #459844

Owner: **Ms. Jennifer M. Clancey, City of Houston, Public Works & Engineering** Owner Well #: **TSP-4**
 Address: **1002 Washington Ave. Houston, TX 77002** Grid #: **65-22-7**
 Well Location: **8626 Martin Luther King Junior Blvd. Houston, TX 77033** Latitude: **29° 39' 26.92" N**
 Well County: **Harris** Longitude: **095° 20' 13" W**
Elevation: No Data
****Plugged Within 48 Hours****

****This well has been plugged****

Plugging Report Tracking #171334

Type of Work: **New Well** Proposed Use: **Monitor**

Drilling Start Date: **8/24/2017** Drilling End Date: **8/24/2017**

Borehole:	Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
	2	0	16

Drilling Method: **Direct Push**

Borehole Completion: **Screened**

Annular Seal Data:	Top Depth (ft.)	Bottom Depth (ft.)	Description (number of sacks & material)
	0	4	Bentonite 1 Bags/Sacks
	4	16	Sand 2 Bags/Sacks

Seal Method: **Poured**

Distance to Property Line (ft.): **No Data**

Sealed By: **Driller**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Alternative Procedure Used** Surface Completion by Driller

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Plug Information:	Description (number of sacks & material)	Top Depth (ft.)	Bottom Depth (ft.)
	Bentonite	0	16

Water Quality:	Strata Depth (ft.)	Water Type
	No Data	No Data

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

The driller did certify that while drilling, deepening or otherwise altering the above described well, injurious water or constituents was encountered and the landowner or person having the well drilled was informed that such well must be completed or plugged in such a manner as to avoid injury or pollution.

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Advanced Drilling Systems**

**904 W. Tidwell, Rd.
Houston, TX 77091**

Driller Name: **M. Firouzbakht** License Number: **56052**

Apprentice Name: **Jason Padilla** Apprentice Number: **59194**

Comments: **No Data**

Lithology:

DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	1	Concrete
1	14	SANDY CLAY - dark red and black, dry, low plasticity, stiff - light gray - red and light gray, moist, medium plasticity - manganese, calcareous concretions
14	15	CLAYEY SAND - tan, saturated
15	16	CLAY - red and light gray, moist, high plasticity, stiff, calcareous concretions

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
1	Riser	New Plastic (PVC)	40	0	6
1	Screen	New Plastic (PVC)	40	6	16

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS PLUGGING REPORT for Tracking #171334

Owner:	Ms. Jennifer M. Clancey, City of Houston, Public Works & Engineering	Owner Well #:	TSP-4
Address:	1002 Washington Ave. Houston, TX 77002	Grid #:	65-22-7
Well Location:	8626 Martin Luther King Junior Blvd. Houston, TX 77033	Latitude:	29° 39' 26.92" N
Well County:	Harris	Longitude:	095° 20' 13" W
		Elevation:	No Data
Well Type:	Monitor		

Drilling Information

Company:	Advanced Drilling Systems	Date Drilled:	8/24/2017
Driller:	Mahmoud Firouzbakht	License Number:	56052

Well Report Tracking #459844

Borehole:	Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
	2	0	16

Plugging Information

Date Plugged:	8/24/2017	Plugger:	Jason Padilla
Plug Method:	Pour in 3/8 bentonite chips when standing water in well is less than 100 feet depth, cement top 2 feet		

Casing Left in Well:

Plug(s) Placed in Well:

No Data	Top (ft.)	Bottom (ft.)	Description (number of sacks & material)
	0	16	Bentonite 1 Bags/Sacks

Certification Data: The driller certified that the driller plugged this well (or the well was plugged under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the reports(s) being returned for completion and resubmittal.

Company Information: **Advanced Drilling Systems**

**904 W. Tidwell, Rd.
Houston, TX 77091**

Driller Name: **M. Firouzbakht** Jason Padilla License Number: **56052**

Apprentice Name: **Jason Padilla** Apprentice Number: **59194**

Comments: **No Data**

STATE OF TEXAS WELL REPORT for Tracking #460828

Owner:	Ms. Jennifer M. Clancey, City of Houston, Public Works & Engineering	Owner Well #:	TSP-5
Address:	1002 Washington Ave. Houston, TX 77002	Grid #:	65-22-7
Well Location:	8626 Martin Luther King Junior Blvd. Houston, TX 77033	Latitude:	29° 39' 26.92" N
Well County:	Harris	Longitude:	095° 20' 13" W
Elevation: No Data			
Plugged Within 48 Hours			

****This well has been plugged****

Plugging Report Tracking #171560

Type of Work: New Well	Proposed Use: Monitor
-------------------------------	------------------------------

Drilling Start Date: **8/24/2017** Drilling End Date: **8/24/2017**

Borehole:	Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
	2	0	16

Drilling Method: **Direct Push**

Borehole Completion: **Screened**

Annular Seal Data:	Top Depth (ft.)	Bottom Depth (ft.)	Description (number of sacks & material)
	0	4	Bentonite 1 Bags/Sacks
	4	16	Sand 2 Bags/Sacks

Seal Method: **Poured**

Distance to Property Line (ft.): **No Data**

Sealed By: **Driller**

Distance to Septic Field or other concentrated contamination (ft.): **No Data**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: Alternative Procedure Used	Surface Completion by Driller
---	--------------------------------------

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **No Test Data Specified**

Plug Information:	Description (number of sacks & material)	Top Depth (ft.)	Bottom Depth (ft.)
	Bentonite	0	16

Water Quality:	Strata Depth (ft.)	Water Type
	No Data	No Data

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

The driller did certify that while drilling, deepening or otherwise altering the above described well, injurious water or constituents was encountered and the landowner or person having the well drilled was informed that such well must be completed or plugged in such a manner as to avoid injury or pollution.

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Advanced Drilling Systems**

**904 W. Tidwell, Rd.
Houston, TX 77091**

Driller Name: **M. Firouzbakht** License Number: **56052**

Apprentice Name: **Jason Padilla** Apprentice Number: **59194**

Comments: **No Data**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Casing:
BLANK PIPE & WELL SCREEN DATA

Top (ft.)	Bottom (ft.)	Description
0	0.5	Concrete
0.5	8	SANDY CLAY - dark gray, moist, medium plasticity, medium stiff - red and light gray - medium plasticity, manganese
8	10	CLAY - light gray and red, moist, high plasticity, calcareous concretions
10	12	SANDY CLAY - low plasticity, very moist, soft,
12	14	SAND - medium brown, saturated, fine-grained
14	16	CLAY - red and light gray, moist, high plasticity, stiff,

Dia (in.)	Type	Material	Sch./Gage	Top (ft.)	Bottom (ft.)
1	Riser	New Plastic (PVC)	40	0	6
1	Screen	New Plastic (PVC)	40	6	16

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

STATE OF TEXAS PLUGGING REPORT for Tracking #171560

Owner:	Ms. Jennifer M. Clancey, City of Houston, Public Works & Engineering	Owner Well #:	TSP-5
Address:	1002 Washington Ave. Houston, TX 77002	Grid #:	65-22-7
Well Location:	8626 Martin Luther King Junior Blvd. Houston, TX 77033	Latitude:	29° 39' 26.92" N
Well County:	Harris	Longitude:	095° 20' 13" W
		Elevation:	No Data
Well Type:	Monitor		

Drilling Information

Company:	Advanced Drilling Systems	Date Drilled:	8/24/2017
Driller:	Mahmoud Firouzbakht	License Number:	56052

Well Report Tracking #460828

Borehole:	Diameter (in.)	Top Depth (ft.)	Bottom Depth (ft.)
	2	0	16

Plugging Information

Date Plugged:	8/24/2017	Plugger:	Jason Padilla
Plug Method:	Pour in 3/8 bentonite chips when standing water in well is less than 100 feet depth, cement top 2 feet		

Casing Left in Well:

Plug(s) Placed in Well:

No Data	Top (ft.)	Bottom (ft.)	Description (number of sacks & material)
	0	16	Bentonite 1 Bags/Sacks

Certification Data: The driller certified that the driller plugged this well (or the well was plugged under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the reports(s) being returned for completion and resubmittal.

Company Information: **Advanced Drilling Systems**

**904 W. Tidwell, Rd.
Houston, TX 77091**

Driller Name: **M. Firouzbakht** License Number: **56052**

Apprentice Name: **Jason Padilla** Apprentice Number: **59194**

Comments: **No Data**

APPENDIX D

ANALYTICAL LABORATORY REPORT

Analytical Report 561295

for
Terracon Houston

Project Manager: Gregg Pawlak

0.43 Acres of Land

92177354A

08-SEP-17

Collected By: Client



**4147 Greenbriar Dr.
Stafford, TX 77477**

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)

Xenco-San Antonio: Texas (T104704534)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

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08-SEP-17

Project Manager: **Gregg Pawlak**

Terracon Houston
11555 Clay Road Suite 100
Houston, TX 77043

Reference: XENCO Report No(s): **561295**

0.43 Acres of Land

Project Address:

Gregg Pawlak:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 561295. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 561295 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,



Debbie Simmons

Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TSP-1 (4-6)	S	08-24-17 10:18		561295-001
TSP-1 (10-12)	S	08-24-17 10:25		561295-002
TSP-2 (4-6)	S	08-24-17 11:20		561295-003
TSP-2 (8-10)	S	08-24-17 11:30		561295-004
TSP-3 (2-4)	S	08-24-17 12:00		561295-005
TSP-3 (8-10)	S	08-24-17 12:10		561295-006
TSP-4 (1-2)	S	08-24-17 12:46		561295-007
TSP-4 (12-14)	S	08-24-17 13:00		561295-008
TSP-5 (2-4)	S	08-24-17 13:30		561295-009
TSP-5 (10-12)	S	08-24-17 13:50		561295-010
TSP-1	W	08-24-17 14:30		561295-011
TSP-2	W	08-24-17 15:00		561295-012
TSP-3	W	08-24-17 17:30		561295-013
TSP-4	W	08-24-17 16:00		561295-014
TSP-5	W	08-24-17 17:00		561295-015
Duplicate	S	08-24-17 00:00		561295-016
Duplicate	W	08-24-17 00:00		561295-017
Equipment Blank	W	08-24-17 14:50		561295-018
Trip Blank	W	08-24-17 00:00		561295-019



Client Name: Terracon Houston

Project Name: 0.43 Acres of Land

Project ID: 92177354A

Work Order Number: 561295

Report Date: 08-SEP-17

Date Received: 25-AUG-17

per email from Prasad Rajulu dated 9/1/17, analyze TSP-3 (2-4) for PAHs and TSP-5 water sample for PAHs.

Batch 3026802: Water sample numbered 561295-015 had about 20% sand in the sample container causing emulsion of the sample which in turn resulted in elevated detection limits for PAHs.



Debbie Simmons
Project Manager



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-1 (4-6)**

Matrix: **Soil**

Sample Depth:

Lab Sample Id: 561295-001

Date Collected: 08.24.17 10.18

Date Received: 08.25.17 15.10

Analytical Method: TPH by Texas1005

Prep Method: 1005

Analyst: **ARL**

% Moist: 15.37

Tech: **ARL**

Seq Number: 3026305

Date Prep: 08.30.17 16.42

Prep seq: 730099

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Range Hydrocarbons	PHC612	<2.17	45.9	2.17	mg/kg	08.30.17 21:02	U	1
C12-C28 Range Hydrocarbons	PHCG1228	<1.49	45.9	1.49	mg/kg	08.30.17 21:02	U	1
C28-C35 Range Hydrocarbons	PHCG2835	<0.623	45.9	0.623	mg/kg	08.30.17 21:02	U	1
Total TPH	PHC635	<0.623		0.623	mg/kg	08.30.17 21:02	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
o-Terphenyl	95	70 - 130	%		
1-Chlorooctane	87	70 - 130	%		

Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-1 (4-6)**

Matrix: **Soil**

Sample Depth:

Lab Sample Id: 561295-001

Date Collected: 08.24.17 10.18

Date Received: 08.25.17 15.10

Analytical Method: VOAs by SW-846 8260

Prep Method: 5035

Analyst: **MCH**

% Moist: 15.37

Tech: **MCH**

Seq Number: 3026678

Date Prep: 09.04.17 14.37

Prep seq: 730356

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.000477	0.00450	0.000141	mg/kg	09.04.17 16:07	J	1
Bromobenzene	108-86-1	<0.000395	0.00450	0.000395	mg/kg	09.04.17 16:07	U	1
Bromochloromethane	74-97-5	<0.000428	0.00450	0.000428	mg/kg	09.04.17 16:07	U	1
Bromodichloromethane	75-27-4	<0.000239	0.00450	0.000239	mg/kg	09.04.17 16:07	U	1
Bromoform	75-25-2	<0.000629	0.00450	0.000629	mg/kg	09.04.17 16:07	U	1
Bromomethane	74-83-9	<0.000951	0.00450	0.000951	mg/kg	09.04.17 16:07	U	1
tert-Butylbenzene	98-06-6	<0.000186	0.00450	0.000186	mg/kg	09.04.17 16:07	U	1
Sec-Butylbenzene	135-98-8	<0.000442	0.00450	0.000442	mg/kg	09.04.17 16:07	U	1
n-Butylbenzene	104-51-8	<0.00180	0.00450	0.00180	mg/kg	09.04.17 16:07	U	1
Carbon Tetrachloride	56-23-5	<0.000210	0.00450	0.000210	mg/kg	09.04.17 16:07	U	1
Chlorobenzene	108-90-7	<0.000215	0.00450	0.000215	mg/kg	09.04.17 16:07	U	1
Chloroethane	75-00-3	<0.000494	0.00901	0.000494	mg/kg	09.04.17 16:07	U	1
Chloroform	67-66-3	<0.000263	0.00450	0.000263	mg/kg	09.04.17 16:07	U	1
Chloromethane	74-87-3	<0.000269	0.00901	0.000269	mg/kg	09.04.17 16:07	U	1
2-Chlorotoluene	95-49-8	<0.000353	0.00450	0.000353	mg/kg	09.04.17 16:07	U	1
4-Chlorotoluene	106-43-4	<0.000396	0.00450	0.000396	mg/kg	09.04.17 16:07	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.000379	0.00450	0.000379	mg/kg	09.04.17 16:07	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.00140	0.00450	0.00140	mg/kg	09.04.17 16:07	U	1
Dibromochloromethane	124-48-1	<0.000426	0.00450	0.000426	mg/kg	09.04.17 16:07	U	1
1,2-Dibromoethane	106-93-4	<0.000381	0.00450	0.000381	mg/kg	09.04.17 16:07	U	1
Dibromomethane	74-95-3	<0.000317	0.00450	0.000317	mg/kg	09.04.17 16:07	U	1
1,2-Dichlorobenzene	95-50-1	<0.000388	0.00450	0.000388	mg/kg	09.04.17 16:07	U	1
1,3-Dichlorobenzene	541-73-1	<0.000334	0.00450	0.000334	mg/kg	09.04.17 16:07	U	1
1,4-Dichlorobenzene	106-46-7	<0.000214	0.00450	0.000214	mg/kg	09.04.17 16:07	U	1
Dichlorodifluoromethane	75-71-8	<0.000383	0.00450	0.000383	mg/kg	09.04.17 16:07	U	1
1,2-Dichloroethane	107-06-2	<0.000316	0.00450	0.000316	mg/kg	09.04.17 16:07	U	1
1,1-Dichloroethane	75-34-3	<0.000181	0.00450	0.000181	mg/kg	09.04.17 16:07	U	1
trans-1,2-dichloroethene	156-60-5	<0.000263	0.00450	0.000263	mg/kg	09.04.17 16:07	U	1
cis-1,2-Dichloroethene	156-59-2	<0.000306	0.00450	0.000306	mg/kg	09.04.17 16:07	U	1
1,1-Dichloroethene	75-35-4	<0.000214	0.00450	0.000214	mg/kg	09.04.17 16:07	U	1
2,2-Dichloropropane	594-20-7	<0.00107	0.00450	0.00107	mg/kg	09.04.17 16:07	U	1
1,3-Dichloropropane	142-28-9	<0.000225	0.00450	0.000225	mg/kg	09.04.17 16:07	U	1
1,2-Dichloropropane	78-87-5	<0.000426	0.00450	0.000426	mg/kg	09.04.17 16:07	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000273	0.00450	0.000273	mg/kg	09.04.17 16:07	U	1
1,1-Dichloropropene	563-58-6	<0.000381	0.00450	0.000381	mg/kg	09.04.17 16:07	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000385	0.00450	0.000385	mg/kg	09.04.17 16:07	U	1
Ethylbenzene	100-41-4	<0.000387	0.00450	0.000387	mg/kg	09.04.17 16:07	U	1
Hexachlorobutadiene	87-68-3	<0.00180	0.00450	0.00180	mg/kg	09.04.17 16:07	U	1
isopropylbenzene	98-82-8	<0.000151	0.00450	0.000151	mg/kg	09.04.17 16:07	U	1
Methylene Chloride	75-09-2	<0.00450	0.0180	0.00450	mg/kg	09.04.17 16:07	U	1
MTBE	1634-04-4	0.0408	0.00450	0.000901	mg/kg	09.04.17 16:07		1
Naphthalene	91-20-3	<0.00180	0.00901	0.00180	mg/kg	09.04.17 16:07	U	1
n-Propylbenzene	103-65-1	<0.000161	0.00450	0.000161	mg/kg	09.04.17 16:07	U	1

Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-1 (4-6)**

Matrix: **Soil**

Sample Depth:

Lab Sample Id: 561295-001

Date Collected: 08.24.17 10.18

Date Received: 08.25.17 15.10

Analytical Method: VOAs by SW-846 8260

Prep Method: 5035

Analyst: **MCH**

% Moist: 15.37

Tech: **MCH**

Seq Number: 3026678

Date Prep: 09.04.17 14.37

Prep seq: 730356

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Styrene	100-42-5	<0.000135	0.00450	0.000135	mg/kg	09.04.17 16:07	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000366	0.00450	0.000366	mg/kg	09.04.17 16:07	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000413	0.00450	0.000413	mg/kg	09.04.17 16:07	U	1
Tetrachloroethylene	127-18-4	<0.000230	0.00450	0.000230	mg/kg	09.04.17 16:07	U	1
Toluene	108-88-3	<0.000901	0.00450	0.000901	mg/kg	09.04.17 16:07	U	1
1,2,3-Trichlorobenzene	87-61-6	<0.00180	0.00450	0.00180	mg/kg	09.04.17 16:07	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00180	0.00450	0.00180	mg/kg	09.04.17 16:07	U	1
1,1,2-Trichloroethane	79-00-5	<0.000293	0.00450	0.000293	mg/kg	09.04.17 16:07	U	1
1,1,1-Trichloroethane	71-55-6	<0.000305	0.00450	0.000305	mg/kg	09.04.17 16:07	U	1
Trichloroethene	79-01-6	<0.000295	0.00450	0.000295	mg/kg	09.04.17 16:07	U	1
Trichlorofluoromethane	75-69-4	<0.000437	0.00450	0.000437	mg/kg	09.04.17 16:07	U	1
1,2,3-Trichloropropane	96-18-4	<0.000632	0.00450	0.000632	mg/kg	09.04.17 16:07	U	1
1,2,4-Trimethylbenzene	95-63-6	<0.000102	0.00450	0.000102	mg/kg	09.04.17 16:07	U	1
1,3,5-Trimethylbenzene	108-67-8	<0.000358	0.00450	0.000358	mg/kg	09.04.17 16:07	U	1
Vinyl Chloride	75-01-4	<0.000745	0.00180	0.000745	mg/kg	09.04.17 16:07	U	1
o-Xylene	95-47-6	<0.000450	0.00450	0.000450	mg/kg	09.04.17 16:07	U	1
m,p-Xylenes	179601-23-1	<0.000901	0.00901	0.000901	mg/kg	09.04.17 16:07	U	1
Total Xylenes	1330-20-7	<0.000450		0.000450	mg/kg	09.04.17 16:07	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Dibromofluoromethane	96	53 - 142	%		
1,2-Dichloroethane-D4	112	56 - 150	%		
Toluene-D8	102	70 - 130	%		
4-Bromofluorobenzene	106	68 - 152	%		



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-1 (10-12)**

Matrix: **Soil**

Sample Depth:

Lab Sample Id: 561295-002

Date Collected: 08.24.17 10.25

Date Received: 08.25.17 15.10

Analytical Method: TPH by Texas1005

Prep Method: 1005

Analyst: ARL

% Moist: 15.53

Tech: ARL

Seq Number: 3026305

Date Prep: 08.30.17 16.45

Prep seq: 730099

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Range Hydrocarbons	PHC612	31.0	47.8	2.26	mg/kg	08.30.17 21:22	J	1
C12-C28 Range Hydrocarbons	PHCG1228	<1.55	47.8	1.55	mg/kg	08.30.17 21:22	U	1
C28-C35 Range Hydrocarbons	PHCG2835	<0.648	47.8	0.648	mg/kg	08.30.17 21:22	U	1
Total TPH	PHC635	31.0		0.648	mg/kg	08.30.17 21:22	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
o-Terphenyl	92	70 - 130	%		
1-Chlorooctane	84	70 - 130	%		

Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-1 (10-12)**

Matrix: **Soil**

Sample Depth:

Lab Sample Id: 561295-002

Date Collected: 08.24.17 10:25

Date Received: 08.25.17 15:10

Analytical Method: VOAs by SW-846 8260

Prep Method: 5035

Analyst: **MCH**

% Moist: 15.53

Tech: **MCH**

Seq Number: 3026678

Date Prep: 09.04.17 16:04

Prep seq: 730356

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.142	0.487	0.0153	mg/kg	09.04.17 19:32	J	82
Bromobenzene	108-86-1	<0.0427	0.487	0.0427	mg/kg	09.04.17 19:32	U	82
Bromoform	74-97-5	<0.0463	0.487	0.0463	mg/kg	09.04.17 19:32	U	82
Bromochloromethane	75-27-4	<0.0258	0.487	0.0258	mg/kg	09.04.17 19:32	U	82
Bromodichloromethane	75-25-2	<0.0680	0.487	0.0680	mg/kg	09.04.17 19:32	U	82
Bromomethane	74-83-9	<0.103	0.487	0.103	mg/kg	09.04.17 19:32	U	82
tert-Butylbenzene	98-06-6	<0.0201	0.487	0.0201	mg/kg	09.04.17 19:32	U	82
Sec-Butylbenzene	135-98-8	1.75	0.487	0.0477	mg/kg	09.04.17 19:32		82
n-Butylbenzene	104-51-8	4.89	0.487	0.195	mg/kg	09.04.17 19:32		82
Carbon Tetrachloride	56-23-5	<0.0227	0.487	0.0227	mg/kg	09.04.17 19:32	U	82
Chlorobenzene	108-90-7	<0.0233	0.487	0.0233	mg/kg	09.04.17 19:32	U	82
Chloroethane	75-00-3	<0.0534	0.974	0.0534	mg/kg	09.04.17 19:32	U	82
Chloroform	67-66-3	<0.0285	0.487	0.0285	mg/kg	09.04.17 19:32	U	82
Chloromethane	74-87-3	<0.0291	0.974	0.0291	mg/kg	09.04.17 19:32	U	82
2-Chlorotoluene	95-49-8	<0.0382	0.487	0.0382	mg/kg	09.04.17 19:32	U	82
4-Chlorotoluene	106-43-4	<0.0428	0.487	0.0428	mg/kg	09.04.17 19:32	U	82
p-Cymene (p-Isopropyltoluene)	99-87-6	0.970	0.487	0.0409	mg/kg	09.04.17 19:32		82
1,2-Dibromo-3-Chloropropane	96-12-8	<0.151	0.487	0.151	mg/kg	09.04.17 19:32	U	82
Dibromochloromethane	124-48-1	<0.0460	0.487	0.0460	mg/kg	09.04.17 19:32	U	82
1,2-Dibromoethane	106-93-4	<0.0412	0.487	0.0412	mg/kg	09.04.17 19:32	U	82
Dibromomethane	74-95-3	<0.0343	0.487	0.0343	mg/kg	09.04.17 19:32	U	82
1,2-Dichlorobenzene	95-50-1	<0.0420	0.487	0.0420	mg/kg	09.04.17 19:32	U	82
1,3-Dichlorobenzene	541-73-1	<0.0362	0.487	0.0362	mg/kg	09.04.17 19:32	U	82
1,4-Dichlorobenzene	106-46-7	<0.0231	0.487	0.0231	mg/kg	09.04.17 19:32	U	82
Dichlorodifluoromethane	75-71-8	<0.0414	0.487	0.0414	mg/kg	09.04.17 19:32	U	82
1,2-Dichloroethane	107-06-2	<0.0342	0.487	0.0342	mg/kg	09.04.17 19:32	U	82
1,1-Dichloroethane	75-34-3	<0.0196	0.487	0.0196	mg/kg	09.04.17 19:32	U	82
trans-1,2-dichloroethene	156-60-5	<0.0285	0.487	0.0285	mg/kg	09.04.17 19:32	U	82
cis-1,2-Dichloroethene	156-59-2	<0.0331	0.487	0.0331	mg/kg	09.04.17 19:32	U	82
1,1-Dichloroethene	75-35-4	<0.0231	0.487	0.0231	mg/kg	09.04.17 19:32	U	82
2,2-Dichloropropane	594-20-7	<0.115	0.487	0.115	mg/kg	09.04.17 19:32	U	82
1,3-Dichloropropane	142-28-9	<0.0243	0.487	0.0243	mg/kg	09.04.17 19:32	U	82
1,2-Dichloropropane	78-87-5	<0.0460	0.487	0.0460	mg/kg	09.04.17 19:32	U	82
trans-1,3-dichloropropene	10061-02-6	<0.0295	0.487	0.0295	mg/kg	09.04.17 19:32	U	82
1,1-Dichloropropene	563-58-6	<0.0412	0.487	0.0412	mg/kg	09.04.17 19:32	U	82
cis-1,3-Dichloropropene	10061-01-5	<0.0416	0.487	0.0416	mg/kg	09.04.17 19:32	U	82
Ethylbenzene	100-41-4	25.7	4.87	0.418	mg/kg	09.04.17 19:09	D	1000
Hexachlorobutadiene	87-68-3	<0.195	0.487	0.195	mg/kg	09.04.17 19:32	U	82
isopropylbenzene	98-82-8	4.05	0.487	0.0163	mg/kg	09.04.17 19:32		82
Methylene Chloride	75-09-2	<0.487	1.95	0.487	mg/kg	09.04.17 19:32	U	82
MTBE	1634-04-4	<0.0974	0.487	0.0974	mg/kg	09.04.17 19:32	U	82
Naphthalene	91-20-3	18.4	9.74	1.95	mg/kg	09.04.17 19:09	D	1000
n-Propylbenzene	103-65-1	14.9	4.87	0.174	mg/kg	09.04.17 19:09	D	1000



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-1 (10-12)**

Matrix: Soil

Sample Depth:

Lab Sample Id: 561295-002

Date Collected: 08.24.17 10:25

Date Received: 08.25.17 15:10

Analytical Method: VOAs by SW-846 8260

Prep Method: 5035

Analyst: MCH

% Moist: 15.53

Tech: MCH

Seq Number: 3026678

Date Prep: 09.04.17 16:04

Prep seq: 730356

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Styrene	100-42-5	<0.0146	0.487	0.0146	mg/kg	09.04.17 19:32	U	82
1,1,1,2-Tetrachloroethane	630-20-6	<0.0396	0.487	0.0396	mg/kg	09.04.17 19:32	U	82
1,1,2,2-Tetrachloroethane	79-34-5	<0.0447	0.487	0.0447	mg/kg	09.04.17 19:32	U	82
Tetrachloroethylene	127-18-4	<0.0249	0.487	0.0249	mg/kg	09.04.17 19:32	U	82
Toluene	108-88-3	0.404	0.487	0.0974	mg/kg	09.04.17 19:32	J	82
1,2,3-Trichlorobenzene	87-61-6	<0.195	0.487	0.195	mg/kg	09.04.17 19:32	U	82
1,2,4-Trichlorobenzene	120-82-1	<0.195	0.487	0.195	mg/kg	09.04.17 19:32	U	82
1,1,2-Trichloroethane	79-00-5	<0.0317	0.487	0.0317	mg/kg	09.04.17 19:32	U	82
1,1,1-Trichloroethane	71-55-6	<0.0330	0.487	0.0330	mg/kg	09.04.17 19:32	U	82
Trichloroethene	79-01-6	<0.0318	0.487	0.0318	mg/kg	09.04.17 19:32	U	82
Trichlorofluoromethane	75-69-4	<0.0473	0.487	0.0473	mg/kg	09.04.17 19:32	U	82
1,2,3-Trichloroproppane	96-18-4	<0.0683	0.487	0.0683	mg/kg	09.04.17 19:32	U	82
1,2,4-Trimethylbenzene	95-63-6	122	4.87	0.110	mg/kg	09.04.17 19:09	D	1000
1,3,5-Trimethylbenzene	108-67-8	32.2	4.87	0.387	mg/kg	09.04.17 19:09	D	1000
Vinyl Chloride	75-01-4	<0.0805	0.195	0.0805	mg/kg	09.04.17 19:32	U	82
o-Xylene	95-47-6	5.00	0.487	0.0487	mg/kg	09.04.17 19:32		82
m,p-Xylenes	179601-23-1	146	9.74	0.974	mg/kg	09.04.17 19:09	D	1000
Total Xylenes	1330-20-7	151		0.0487	mg/kg	09.04.17 19:09		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Dibromofluoromethane	85	53 - 142	%		
1,2-Dichloroethane-D4	87	56 - 150	%		
Toluene-D8	112	70 - 130	%		
4-Bromofluorobenzene	113	68 - 152	%		



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-2 (4-6)**

Matrix: **Soil**

Sample Depth:

Lab Sample Id: 561295-003

Date Collected: 08.24.17 11.20

Date Received: 08.25.17 15.10

Analytical Method: TPH by Texas1005

Prep Method: 1005

Analyst: **ARL**

% Moist: 18.65

Tech: **ARL**

Seq Number: 3026305

Date Prep: 08.30.17 16.48

Prep seq: 730099

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Range Hydrocarbons	PHC612	<2.54	53.8	2.54	mg/kg	08.30.17 21:43	U	1
C12-C28 Range Hydrocarbons	PHCG1228	<1.74	53.8	1.74	mg/kg	08.30.17 21:43	U	1
C28-C35 Range Hydrocarbons	PHCG2835	<0.729	53.8	0.729	mg/kg	08.30.17 21:43	U	1
Total TPH	PHC635	<0.729		0.729	mg/kg	08.30.17 21:43	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
o-Terphenyl	104	70 - 130	%		
1-Chlorooctane	96	70 - 130	%		

Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-2 (4-6)**

Matrix: **Soil**

Sample Depth:

Lab Sample Id: 561295-003

Date Collected: 08.24.17 11:20

Date Received: 08.25.17 15:10

Analytical Method: VOAs by SW-846 8260

Prep Method: 5035

Analyst: **MCH**

% Moist: 18.65

Tech: **MCH**

Seq Number: 3026581

Date Prep: 09.03.17 18:46

Prep seq: 730314

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.00181	0.00585	0.000184	mg/kg	09.03.17 17:26	J	1
Bromobenzene	108-86-1	<0.000513	0.00585	0.000513	mg/kg	09.03.17 17:26	U	1
Bromochloromethane	74-97-5	<0.000556	0.00585	0.000556	mg/kg	09.03.17 17:26	U	1
Bromodichloromethane	75-27-4	<0.000311	0.00585	0.000311	mg/kg	09.03.17 17:26	U	1
Bromoform	75-25-2	<0.000818	0.00585	0.000818	mg/kg	09.03.17 17:26	U	1
Bromomethane	74-83-9	<0.00124	0.00585	0.00124	mg/kg	09.03.17 17:26	U	1
tert-Butylbenzene	98-06-6	<0.000242	0.00585	0.000242	mg/kg	09.03.17 17:26	U	1
Sec-Butylbenzene	135-98-8	0.000784	0.00585	0.000574	mg/kg	09.03.17 17:26	J	1
n-Butylbenzene	104-51-8	<0.00234	0.00585	0.00234	mg/kg	09.03.17 17:26	U	1
Carbon Tetrachloride	56-23-5	<0.000273	0.00585	0.000273	mg/kg	09.03.17 17:26	U	1
Chlorobenzene	108-90-7	<0.000280	0.00585	0.000280	mg/kg	09.03.17 17:26	U	1
Chloroethane	75-00-3	<0.000642	0.0117	0.000642	mg/kg	09.03.17 17:26	U	1
Chloroform	67-66-3	<0.000342	0.00585	0.000342	mg/kg	09.03.17 17:26	U	1
Chloromethane	74-87-3	<0.000350	0.0117	0.000350	mg/kg	09.03.17 17:26	U	1
2-Chlorotoluene	95-49-8	<0.000459	0.00585	0.000459	mg/kg	09.03.17 17:26	U	1
4-Chlorotoluene	106-43-4	<0.000514	0.00585	0.000514	mg/kg	09.03.17 17:26	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.000492	0.00585	0.000492	mg/kg	09.03.17 17:26	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.00182	0.00585	0.00182	mg/kg	09.03.17 17:26	U	1
Dibromochloromethane	124-48-1	<0.000553	0.00585	0.000553	mg/kg	09.03.17 17:26	U	1
1,2-Dibromoethane	106-93-4	<0.000496	0.00585	0.000496	mg/kg	09.03.17 17:26	U	1
Dibromomethane	74-95-3	<0.000412	0.00585	0.000412	mg/kg	09.03.17 17:26	U	1
1,2-Dichlorobenzene	95-50-1	<0.000505	0.00585	0.000505	mg/kg	09.03.17 17:26	U	1
1,3-Dichlorobenzene	541-73-1	<0.000435	0.00585	0.000435	mg/kg	09.03.17 17:26	U	1
1,4-Dichlorobenzene	106-46-7	<0.000278	0.00585	0.000278	mg/kg	09.03.17 17:26	U	1
Dichlorodifluoromethane	75-71-8	<0.000498	0.00585	0.000498	mg/kg	09.03.17 17:26	U	1
1,2-Dichloroethane	107-06-2	<0.000411	0.00585	0.000411	mg/kg	09.03.17 17:26	U	1
1,1-Dichloroethane	75-34-3	<0.000235	0.00585	0.000235	mg/kg	09.03.17 17:26	U	1
trans-1,2-dichloroethene	156-60-5	<0.000342	0.00585	0.000342	mg/kg	09.03.17 17:26	U	1
cis-1,2-Dichloroethene	156-59-2	<0.000398	0.00585	0.000398	mg/kg	09.03.17 17:26	U	1
1,1-Dichloroethene	75-35-4	<0.000278	0.00585	0.000278	mg/kg	09.03.17 17:26	U	1
2,2-Dichloropropane	594-20-7	<0.00139	0.00585	0.00139	mg/kg	09.03.17 17:26	U	1
1,3-Dichloropropane	142-28-9	<0.000293	0.00585	0.000293	mg/kg	09.03.17 17:26	U	1
1,2-Dichloropropane	78-87-5	<0.000553	0.00585	0.000553	mg/kg	09.03.17 17:26	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000355	0.00585	0.000355	mg/kg	09.03.17 17:26	U	1
1,1-Dichloropropene	563-58-6	<0.000495	0.00585	0.000495	mg/kg	09.03.17 17:26	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000501	0.00585	0.000501	mg/kg	09.03.17 17:26	U	1
Ethylbenzene	100-41-4	<0.000503	0.00585	0.000503	mg/kg	09.03.17 17:26	U	1
Hexachlorobutadiene	87-68-3	<0.00234	0.00585	0.00234	mg/kg	09.03.17 17:26	U	1
isopropylbenzene	98-82-8	0.00327	0.00585	0.000196	mg/kg	09.03.17 17:26	J	1
Methylene Chloride	75-09-2	<0.00585	0.0234	0.00585	mg/kg	09.03.17 17:26	U	1
MTBE	1634-04-4	0.336	0.00585	0.00117	mg/kg	09.03.17 17:26	U	1
Naphthalene	91-20-3	<0.00234	0.0117	0.00234	mg/kg	09.03.17 17:26	U	1
n-Propylbenzene	103-65-1	0.00268	0.00585	0.000210	mg/kg	09.03.17 17:26	J	1



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-2 (4-6)**

Matrix: **Soil**

Sample Depth:

Lab Sample Id: 561295-003

Date Collected: 08.24.17 11:20

Date Received: 08.25.17 15:10

Analytical Method: VOAs by SW-846 8260

Prep Method: 5035

Analyst: **MCH**

% Moist: 18.65

Tech: **MCH**

Seq Number: 3026581

Date Prep: 09.03.17 18:46

Prep seq: 730314

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Styrene	100-42-5	<0.000176	0.00585	0.000176	mg/kg	09.03.17 17:26	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000476	0.00585	0.000476	mg/kg	09.03.17 17:26	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000537	0.00585	0.000537	mg/kg	09.03.17 17:26	U	1
Tetrachloroethylene	127-18-4	<0.000300	0.00585	0.000300	mg/kg	09.03.17 17:26	U	1
Toluene	108-88-3	<0.00117	0.00585	0.00117	mg/kg	09.03.17 17:26	U	1
1,2,3-Trichlorobenzene	87-61-6	<0.00234	0.00585	0.00234	mg/kg	09.03.17 17:26	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00234	0.00585	0.00234	mg/kg	09.03.17 17:26	U	1
1,1,2-Trichloroethane	79-00-5	<0.000381	0.00585	0.000381	mg/kg	09.03.17 17:26	U	1
1,1,1-Trichloroethane	71-55-6	<0.000397	0.00585	0.000397	mg/kg	09.03.17 17:26	U	1
Trichloroethene	79-01-6	<0.000383	0.00585	0.000383	mg/kg	09.03.17 17:26	U	1
Trichlorofluoromethane	75-69-4	<0.000568	0.00585	0.000568	mg/kg	09.03.17 17:26	U	1
1,2,3-Trichloropropane	96-18-4	<0.000821	0.00585	0.000821	mg/kg	09.03.17 17:26	U	1
1,2,4-Trimethylbenzene	95-63-6	<0.000132	0.00585	0.000132	mg/kg	09.03.17 17:26	U	1
1,3,5-Trimethylbenzene	108-67-8	<0.000465	0.00585	0.000465	mg/kg	09.03.17 17:26	U	1
Vinyl Chloride	75-01-4	<0.000968	0.00234	0.000968	mg/kg	09.03.17 17:26	U	1
o-Xylene	95-47-6	<0.000585	0.00585	0.000585	mg/kg	09.03.17 17:26	U	1
m,p-Xylenes	179601-23-1	<0.00117	0.0117	0.00117	mg/kg	09.03.17 17:26	U	1
Total Xylenes	1330-20-7	<0.000585		0.000585	mg/kg	09.03.17 17:26	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Dibromofluoromethane	95	53 - 142	%		
1,2-Dichloroethane-D4	111	56 - 150	%		
Toluene-D8	109	70 - 130	%		
4-Bromofluorobenzene	119	68 - 152	%		



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-2 (8-10)**

Matrix: **Soil**

Sample Depth:

Lab Sample Id: 561295-004

Date Collected: 08.24.17 11.30

Date Received: 08.25.17 15.10

Analytical Method: TPH by Texas1005

Prep Method: 1005

Analyst: ARL

% Moist: 19.78

Tech: ARL

Seq Number: 3026305

Date Prep: 08.30.17 16.33

Prep seq: 730099

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Range Hydrocarbons	PHC612	35.3	96.0	4.54	mg/kg	08.30.17 19:59	J	2
C12-C28 Range Hydrocarbons	PHCG1228	<3.11	96.0	3.11	mg/kg	08.30.17 19:59	U	2
C28-C35 Range Hydrocarbons	PHCG2835	<1.30	96.0	1.30	mg/kg	08.30.17 19:59	U	2
Total TPH	PHC635	35.3		1.30	mg/kg	08.30.17 19:59	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
o-Terphenyl	89	70 - 130	%		
1-Chlorooctane	84	70 - 130	%		

Certificate of Analytical Results

561295

Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-2 (8-10)**

Lab Sample Id: 561295-004

Analytical Method: VOAs by SW-846 8260

Analyst: MCH

Seq Number: 3026581

Matrix: Soil

Date Collected: 08.24.17 11:30

Sample Depth:

Date Received: 08.25.17 15:10

Prep Method: 5035

Tech: MCH

Date Prep: 09.03.17 13:21

Prep seq: 730314

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.0922	0.121	0.00379	mg/kg	09.03.17 17:03	J	19
Bromobenzene	108-86-1	<0.0106	0.121	0.0106	mg/kg	09.03.17 17:03	U	19
Bromochloromethane	74-97-5	<0.0115	0.121	0.0115	mg/kg	09.03.17 17:03	U	19
Bromodichloromethane	75-27-4	<0.00642	0.121	0.00642	mg/kg	09.03.17 17:03	U	19
Bromoform	75-25-2	<0.0169	0.121	0.0169	mg/kg	09.03.17 17:03	U	19
Bromomethane	74-83-9	<0.0256	0.121	0.0256	mg/kg	09.03.17 17:03	UX	19
tert-Butylbenzene	98-06-6	<0.00499	0.121	0.00499	mg/kg	09.03.17 17:03	U	19
Sec-Butylbenzene	135-98-8	0.101	0.121	0.0119	mg/kg	09.03.17 17:03	J	19
n-Butylbenzene	104-51-8	0.370	0.121	0.0484	mg/kg	09.03.17 17:03		19
Carbon Tetrachloride	56-23-5	<0.00565	0.121	0.00565	mg/kg	09.03.17 17:03	U	19
Chlorobenzene	108-90-7	<0.00579	0.121	0.00579	mg/kg	09.03.17 17:03	U	19
Chloroethane	75-00-3	<0.0133	0.242	0.0133	mg/kg	09.03.17 17:03	UX	19
Chloroform	67-66-3	<0.00708	0.121	0.00708	mg/kg	09.03.17 17:03	U	19
Chloromethane	74-87-3	<0.00722	0.242	0.00722	mg/kg	09.03.17 17:03	U	19
2-Chlorotoluene	95-49-8	<0.00950	0.121	0.00950	mg/kg	09.03.17 17:03	U	19
4-Chlorotoluene	106-43-4	<0.0106	0.121	0.0106	mg/kg	09.03.17 17:03	U	19
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.0102	0.121	0.0102	mg/kg	09.03.17 17:03	U	19
1,2-Dibromo-3-Chloropropane	96-12-8	<0.0375	0.121	0.0375	mg/kg	09.03.17 17:03	U	19
Dibromochloromethane	124-48-1	<0.0114	0.121	0.0114	mg/kg	09.03.17 17:03	U	19
1,2-Dibromoethane	106-93-4	<0.0102	0.121	0.0102	mg/kg	09.03.17 17:03	U	19
Dibromomethane	74-95-3	<0.00852	0.121	0.00852	mg/kg	09.03.17 17:03	U	19
1,2-Dichlorobenzene	95-50-1	<0.0104	0.121	0.0104	mg/kg	09.03.17 17:03	U	19
1,3-Dichlorobenzene	541-73-1	<0.00899	0.121	0.00899	mg/kg	09.03.17 17:03	U	19
1,4-Dichlorobenzene	106-46-7	<0.00575	0.121	0.00575	mg/kg	09.03.17 17:03	U	19
Dichlorodifluoromethane	75-71-8	<0.0103	0.121	0.0103	mg/kg	09.03.17 17:03	U	19
1,2-Dichloroethane	107-06-2	<0.00849	0.121	0.00849	mg/kg	09.03.17 17:03	U	19
1,1-Dichloroethane	75-34-3	<0.00487	0.121	0.00487	mg/kg	09.03.17 17:03	U	19
trans-1,2-dichloroethene	156-60-5	<0.00708	0.121	0.00708	mg/kg	09.03.17 17:03	U	19
cis-1,2-Dichloroethene	156-59-2	<0.00823	0.121	0.00823	mg/kg	09.03.17 17:03	U	19
1,1-Dichloroethene	75-35-4	<0.00574	0.121	0.00574	mg/kg	09.03.17 17:03	U	19
2,2-Dichloropropane	594-20-7	<0.0286	0.121	0.0286	mg/kg	09.03.17 17:03	U	19
1,3-Dichloropropane	142-28-9	<0.00605	0.121	0.00605	mg/kg	09.03.17 17:03	U	19
1,2-Dichloropropane	78-87-5	<0.0114	0.121	0.0114	mg/kg	09.03.17 17:03	U	19
trans-1,3-dichloropropene	10061-02-6	<0.00734	0.121	0.00734	mg/kg	09.03.17 17:03	U	19
1,1-Dichloropropene	563-58-6	<0.0102	0.121	0.0102	mg/kg	09.03.17 17:03	U	19
cis-1,3-Dichloropropene	10061-01-5	<0.0103	0.121	0.0103	mg/kg	09.03.17 17:03	U	19
Ethylbenzene	100-41-4	0.142	0.121	0.0104	mg/kg	09.03.17 17:03		19
Hexachlorobutadiene	87-68-3	<0.0484	0.121	0.0484	mg/kg	09.03.17 17:03	U	19
isopropylbenzene	98-82-8	0.160	0.121	0.00405	mg/kg	09.03.17 17:03		19
Methylene Chloride	75-09-2	<0.121	0.484	0.121	mg/kg	09.03.17 17:03		19
MTBE	1634-04-4	1.26	0.121	0.0242	mg/kg	09.03.17 17:03		19
Naphthalene	91-20-3	0.316	0.242	0.0484	mg/kg	09.03.17 17:03		19
n-Propylbenzene	103-65-1	0.620	0.121	0.00433	mg/kg	09.03.17 17:03		19



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-2 (8-10)**

Matrix: **Soil**

Sample Depth:

Lab Sample Id: 561295-004

Date Collected: 08.24.17 11:30

Date Received: 08.25.17 15:10

Analytical Method: VOAs by SW-846 8260

Prep Method: 5035

Analyst: MCH

% Moist: 19.78

Tech: MCH

Seq Number: 3026581

Date Prep: 09.03.17 13:21

Prep seq: 730314

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Styrene	100-42-5	<0.00363	0.121	0.00363	mg/kg	09.03.17 17:03	U	19
1,1,1,2-Tetrachloroethane	630-20-6	<0.00985	0.121	0.00985	mg/kg	09.03.17 17:03	U	19
1,1,2,2-Tetrachloroethane	79-34-5	<0.0111	0.121	0.0111	mg/kg	09.03.17 17:03	U	19
Tetrachloroethylene	127-18-4	<0.00619	0.121	0.00619	mg/kg	09.03.17 17:03	U	19
Toluene	108-88-3	<0.0242	0.121	0.0242	mg/kg	09.03.17 17:03	U	19
1,2,3-Trichlorobenzene	87-61-6	<0.0484	0.121	0.0484	mg/kg	09.03.17 17:03	U	19
1,2,4-Trichlorobenzene	120-82-1	<0.0484	0.121	0.0484	mg/kg	09.03.17 17:03	U	19
1,1,2-Trichloroethane	79-00-5	<0.00788	0.121	0.00788	mg/kg	09.03.17 17:03	U	19
1,1,1-Trichloroethane	71-55-6	<0.00820	0.121	0.00820	mg/kg	09.03.17 17:03	U	19
Trichloroethene	79-01-6	<0.00791	0.121	0.00791	mg/kg	09.03.17 17:03	U	19
Trichlorofluoromethane	75-69-4	<0.0117	0.121	0.0117	mg/kg	09.03.17 17:03	UX	19
1,2,3-Trichloropropane	96-18-4	<0.0170	0.121	0.0170	mg/kg	09.03.17 17:03	U	19
1,2,4-Trimethylbenzene	95-63-6	0.207	0.121	0.00273	mg/kg	09.03.17 17:03		19
1,3,5-Trimethylbenzene	108-67-8	0.0477	0.121	0.00962	mg/kg	09.03.17 17:03	J	19
Vinyl Chloride	75-01-4	<0.0200	0.0484	0.0200	mg/kg	09.03.17 17:03	U	19
o-Xylene	95-47-6	<0.0121	0.121	0.0121	mg/kg	09.03.17 17:03	U	19
m,p-Xylenes	179601-23-1	0.101	0.242	0.0242	mg/kg	09.03.17 17:03	J	19
Total Xylenes	1330-20-7	0.101		0.0121	mg/kg	09.03.17 17:03	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Dibromofluoromethane	80	53 - 142	%		
1,2-Dichloroethane-D4	99	56 - 150	%		
Toluene-D8	104	70 - 130	%		
4-Bromofluorobenzene	108	68 - 152	%		



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-3 (2-4)**

Lab Sample Id: 561295-005

Analytical Method: TPH by Texas1005

Analyst: ARL

Seq Number: 3026305

Matrix: Soil

Date Collected: 08.24.17 12:00

Sample Depth:

Date Received: 08.25.17 15:10

Prep Method: 1005

Tech: ARL

Date Prep: 08.30.17 16:51

Prep seq: 730099

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Range Hydrocarbons	PHC612	200	40.6	1.92	mg/kg	08.31.17 12:19		1
C12-C28 Range Hydrocarbons	PHCG1228	58.5	40.6	1.31	mg/kg	08.31.17 12:19		1
C28-C35 Range Hydrocarbons	PHCG2835	<0.550	40.6	0.550	mg/kg	08.31.17 12:19	U	1
Total TPH	PHC635	259		0.550	mg/kg	08.31.17 12:19		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
o-Terphenyl	94	70 - 130	%		
1-Chlorooctane	96	70 - 130	%		

Analytical Method: PAHs by 8270C SIM

Analyst: WEW

Seq Number: 3026783

Prep Method: 3545

% Moist: 14.11

Tech: WEW

Date Prep: 09.05.17 10:25

Prep seq: 730324

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Acenaphthene	83-32-9	<0.000969	0.00194	0.000969	mg/kg	09.06.17 05:54	U	1
Acenaphthylene	208-96-8	<0.000969	0.00194	0.000969	mg/kg	09.06.17 05:54	U	1
Anthracene	120-12-7	<0.000969	0.00194	0.000969	mg/kg	09.06.17 05:54	U	1
Benzo(a)anthracene	56-55-3	<0.000969	0.00194	0.000969	mg/kg	09.06.17 05:54	U	1
Benzo(a)pyrene	50-32-8	<0.000969	0.00194	0.000969	mg/kg	09.06.17 05:54	U	1
Benzo(b)fluoranthene	205-99-2	<0.000969	0.00194	0.000969	mg/kg	09.06.17 05:54	U	1
Benzo(g,h,i)perylene	191-24-2	<0.000969	0.00194	0.000969	mg/kg	09.06.17 05:54	U	1
Benzo(k)fluoranthene	207-08-9	<0.000969	0.00194	0.000969	mg/kg	09.06.17 05:54	U	1
Chrysene	218-01-9	<0.000969	0.00194	0.000969	mg/kg	09.06.17 05:54	U	1
Dibenz(a,h)anthracene	53-70-3	<0.000969	0.00194	0.000969	mg/kg	09.06.17 05:54	U	1
Dibenzofuran	132-64-9	<0.000969	0.00194	0.000969	mg/kg	09.06.17 05:54	U	1
Fluoranthene	206-44-0	0.00130	0.00194	0.000969	mg/kg	09.06.17 05:54	J	1
Fluorene	86-73-7	0.00374	0.00194	0.000969	mg/kg	09.06.17 05:54		1
Indeno(1,2,3-c,d)Pyrene	193-39-5	<0.000969	0.00194	0.000969	mg/kg	09.06.17 05:54	U	1
Naphthalene	91-20-3	0.0408	0.0194	0.000969	mg/kg	09.06.17 05:54		1
Phenanthrene	85-01-8	0.00242	0.00194	0.000969	mg/kg	09.06.17 05:54		1
Pyrene	129-00-0	0.00204	0.00194	0.000969	mg/kg	09.06.17 05:54		1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Nitrobenzene-d5	54	31 - 130	%		
2-Fluorobiphenyl	89	51 - 133	%		
Terphenyl-D14	93	46 - 137	%		

Certificate of Analytical Results



561295

Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: TSP-3 (2-4)	Matrix: Soil	Sample Depth:
Lab Sample Id: 561295-005	Date Collected: 08.24.17 12:00	Date Received: 08.25.17 15:10
Analytical Method: VOAs by SW-846 8260		Prep Method: 5035
Analyst: MCH	% Moist: 14.11	Tech: MCH
Seq Number: 3026581	Date Prep: 09.03.17 17:42	
	Prep seq: 730314	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00403	0.129	0.00403	mg/kg	09.03.17 20:11	U	22
Bromobenzene	108-86-1	<0.0113	0.129	0.0113	mg/kg	09.03.17 20:11	U	22
Bromochloromethane	74-97-5	<0.0122	0.129	0.0122	mg/kg	09.03.17 20:11	U	22
Bromodichloromethane	75-27-4	<0.00683	0.129	0.00683	mg/kg	09.03.17 20:11	U	22
Bromoform	75-25-2	<0.0180	0.129	0.0180	mg/kg	09.03.17 20:11	U	22
Bromomethane	74-83-9	<0.0272	0.129	0.0272	mg/kg	09.03.17 20:11	U	22
tert-Butylbenzene	98-06-6	<0.00531	0.129	0.00531	mg/kg	09.03.17 20:11	U	22
Sec-Butylbenzene	135-98-8	0.253	0.129	0.0126	mg/kg	09.03.17 20:11		22
n-Butylbenzene	104-51-8	1.23	0.129	0.0514	mg/kg	09.03.17 20:11		22
Carbon Tetrachloride	56-23-5	<0.00601	0.129	0.00601	mg/kg	09.03.17 20:11	U	22
Chlorobenzene	108-90-7	<0.00615	0.129	0.00615	mg/kg	09.03.17 20:11	U	22
Chloroethane	75-00-3	<0.0141	0.257	0.0141	mg/kg	09.03.17 20:11	U	22
Chloroform	67-66-3	<0.00752	0.129	0.00752	mg/kg	09.03.17 20:11	U	22
Chloromethane	74-87-3	<0.00768	0.257	0.00768	mg/kg	09.03.17 20:11	U	22
2-Chlorotoluene	95-49-8	<0.0101	0.129	0.0101	mg/kg	09.03.17 20:11	U	22
4-Chlorotoluene	106-43-4	<0.0113	0.129	0.0113	mg/kg	09.03.17 20:11	U	22
p-Cymene (p-Isopropyltoluene)	99-87-6	0.148	0.129	0.0108	mg/kg	09.03.17 20:11		22
1,2-Dibromo-3-Chloropropane	96-12-8	<0.0399	0.129	0.0399	mg/kg	09.03.17 20:11	U	22
Dibromochloromethane	124-48-1	<0.0122	0.129	0.0122	mg/kg	09.03.17 20:11	U	22
1,2-Dibromoethane	106-93-4	<0.0109	0.129	0.0109	mg/kg	09.03.17 20:11	U	22
Dibromomethane	74-95-3	<0.00906	0.129	0.00906	mg/kg	09.03.17 20:11	U	22
1,2-Dichlorobenzene	95-50-1	<0.0111	0.129	0.0111	mg/kg	09.03.17 20:11	U	22
1,3-Dichlorobenzene	541-73-1	<0.00955	0.129	0.00955	mg/kg	09.03.17 20:11	U	22
1,4-Dichlorobenzene	106-46-7	<0.00611	0.129	0.00611	mg/kg	09.03.17 20:11	U	22
Dichlorodifluoromethane	75-71-8	<0.0109	0.129	0.0109	mg/kg	09.03.17 20:11	U	22
1,2-Dichloroethane	107-06-2	<0.00902	0.129	0.00902	mg/kg	09.03.17 20:11	U	22
1,1-Dichloroethane	75-34-3	<0.00517	0.129	0.00517	mg/kg	09.03.17 20:11	U	22
trans-1,2-dichloroethene	156-60-5	<0.00752	0.129	0.00752	mg/kg	09.03.17 20:11	U	22
cis-1,2-Dichloroethene	156-59-2	<0.00875	0.129	0.00875	mg/kg	09.03.17 20:11	U	22
1,1-Dichloroethene	75-35-4	<0.00610	0.129	0.00610	mg/kg	09.03.17 20:11	U	22
2,2-Dichloropropane	594-20-7	<0.0304	0.129	0.0304	mg/kg	09.03.17 20:11	U	22
1,3-Dichloropropane	142-28-9	<0.00643	0.129	0.00643	mg/kg	09.03.17 20:11	U	22
1,2-Dichloropropane	78-87-5	<0.0121	0.129	0.0121	mg/kg	09.03.17 20:11	U	22
trans-1,3-dichloropropene	10061-02-6	<0.00780	0.129	0.00780	mg/kg	09.03.17 20:11	U	22
1,1-Dichloropropene	563-58-6	<0.0109	0.129	0.0109	mg/kg	09.03.17 20:11	U	22
cis-1,3-Dichloropropene	10061-01-5	<0.0110	0.129	0.0110	mg/kg	09.03.17 20:11	U	22
Ethylbenzene	100-41-4	0.0586	0.129	0.0110	mg/kg	09.03.17 20:11	J	22
Hexachlorobutadiene	87-68-3	<0.0514	0.129	0.0514	mg/kg	09.03.17 20:11	U	22
isopropylbenzene	98-82-8	0.248	0.129	0.00430	mg/kg	09.03.17 20:11		22
Methylene Chloride	75-09-2	<0.129	0.514	0.129	mg/kg	09.03.17 20:11	U	22
MTBE	1634-04-4	<0.0257	0.129	0.0257	mg/kg	09.03.17 20:11	U	22
Naphthalene	91-20-3	0.811	0.257	0.0514	mg/kg	09.03.17 20:11		22
n-Propylbenzene	103-65-1	1.29	0.129	0.00461	mg/kg	09.03.17 20:11		22



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-3 (2-4)**

Matrix: **Soil**

Sample Depth:

Lab Sample Id: 561295-005

Date Collected: 08.24.17 12.00

Date Received: 08.25.17 15.10

Analytical Method: VOAs by SW-846 8260

Prep Method: 5035

Analyst: **MCH**

% Moist: 14.11

Tech: **MCH**

Seq Number: 3026581

Date Prep: 09.03.17 17.42

Prep seq: 730314

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Styrene	100-42-5	<0.00386	0.129	0.00386	mg/kg	09.03.17 20:11	U	22
1,1,1,2-Tetrachloroethane	630-20-6	<0.0105	0.129	0.0105	mg/kg	09.03.17 20:11	U	22
1,1,2,2-Tetrachloroethane	79-34-5	<0.0118	0.129	0.0118	mg/kg	09.03.17 20:11	U	22
Tetrachloroethylene	127-18-4	<0.00658	0.129	0.00658	mg/kg	09.03.17 20:11	U	22
Toluene	108-88-3	<0.0257	0.129	0.0257	mg/kg	09.03.17 20:11	U	22
1,2,3-Trichlorobenzene	87-61-6	<0.0514	0.129	0.0514	mg/kg	09.03.17 20:11	U	22
1,2,4-Trichlorobenzene	120-82-1	<0.0514	0.129	0.0514	mg/kg	09.03.17 20:11	U	22
1,1,2-Trichloroethane	79-00-5	<0.00837	0.129	0.00837	mg/kg	09.03.17 20:11	U	22
1,1,1-Trichloroethane	71-55-6	<0.00871	0.129	0.00871	mg/kg	09.03.17 20:11	U	22
Trichloroethene	79-01-6	<0.00841	0.129	0.00841	mg/kg	09.03.17 20:11	U	22
Trichlorofluoromethane	75-69-4	<0.0125	0.129	0.0125	mg/kg	09.03.17 20:11	U	22
1,2,3-Trichloroproppane	96-18-4	<0.0180	0.129	0.0180	mg/kg	09.03.17 20:11	U	22
1,2,4-Trimethylbenzene	95-63-6	2.22	0.129	0.00290	mg/kg	09.03.17 20:11		22
1,3,5-Trimethylbenzene	108-67-8	<0.0102	0.129	0.0102	mg/kg	09.03.17 20:11	U	22
Vinyl Chloride	75-01-4	<0.0213	0.0514	0.0213	mg/kg	09.03.17 20:11	U	22
o-Xylene	95-47-6	<0.0129	0.129	0.0129	mg/kg	09.03.17 20:11	U	22
m,p-Xylenes	179601-23-1	<0.0257	0.257	0.0257	mg/kg	09.03.17 20:11	U	22
Total Xylenes	1330-20-7	<0.0129		0.0129	mg/kg	09.03.17 20:11	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Dibromofluoromethane	81	53 - 142	%		
1,2-Dichloroethane-D4	100	56 - 150	%		
Toluene-D8	103	70 - 130	%		
4-Bromofluorobenzene	113	68 - 152	%		

Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-3 (8-10)**

Matrix: **Soil**

Sample Depth:

Lab Sample Id: 561295-006

Date Collected: 08.24.17 12.10

Date Received: 08.25.17 15.10

Analytical Method: TPH by Texas1005

Prep Method: 1005

Analyst: ARL

% Moist: 13.57

Tech: ARL

Seq Number: 3026305

Date Prep: 08.30.17 16.54

Prep seq: 730099

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Range Hydrocarbons	PHC612	56.1	50.3	2.38	mg/kg	08.31.17 12:40		1
C12-C28 Range Hydrocarbons	PHCG1228	18.6	50.3	1.63	mg/kg	08.31.17 12:40	J	1
C28-C35 Range Hydrocarbons	PHCG2835	<0.682	50.3	0.682	mg/kg	08.31.17 12:40	U	1
Total TPH	PHC635	74.7		0.682	mg/kg	08.31.17 12:40		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
o-Terphenyl	89	70 - 130	%		
1-Chlorooctane	85	70 - 130	%		

Certificate of Analytical Results

561295

Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-3 (8-10)**

Lab Sample Id: 561295-006

Analytical Method: VOAs by SW-846 8260

Analyst: MCH

Seq Number: 3026678

Matrix: Soil

Date Collected: 08.24.17 12.10

Sample Depth:

Date Received: 08.25.17 15.10

Prep Method: 5035

Tech: MCH

Date Prep: 09.04.17 16.02

Prep seq: 730356

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.0108	0.106	0.00333	mg/kg	09.04.17 17:37	J	18
Bromobenzene	108-86-1	<0.00930	0.106	0.00930	mg/kg	09.04.17 17:37	U	18
Bromochloromethane	74-97-5	<0.0101	0.106	0.0101	mg/kg	09.04.17 17:37	U	18
Bromodichloromethane	75-27-4	<0.00564	0.106	0.00564	mg/kg	09.04.17 17:37	U	18
Bromoform	75-25-2	<0.0148	0.106	0.0148	mg/kg	09.04.17 17:37	U	18
Bromomethane	74-83-9	<0.0224	0.106	0.0224	mg/kg	09.04.17 17:37	U	18
tert-Butylbenzene	98-06-6	<0.00438	0.106	0.00438	mg/kg	09.04.17 17:37	U	18
Sec-Butylbenzene	135-98-8	0.200	0.106	0.0104	mg/kg	09.04.17 17:37		18
n-Butylbenzene	104-51-8	0.858	0.106	0.0425	mg/kg	09.04.17 17:37		18
Carbon Tetrachloride	56-23-5	<0.00496	0.106	0.00496	mg/kg	09.04.17 17:37	U	18
Chlorobenzene	108-90-7	<0.00508	0.106	0.00508	mg/kg	09.04.17 17:37	U	18
Chloroethane	75-00-3	<0.0117	0.212	0.0117	mg/kg	09.04.17 17:37	U	18
Chloroform	67-66-3	<0.00621	0.106	0.00621	mg/kg	09.04.17 17:37	U	18
Chloromethane	74-87-3	<0.00634	0.212	0.00634	mg/kg	09.04.17 17:37	U	18
2-Chlorotoluene	95-49-8	<0.00833	0.106	0.00833	mg/kg	09.04.17 17:37	U	18
4-Chlorotoluene	106-43-4	<0.00933	0.106	0.00933	mg/kg	09.04.17 17:37	U	18
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.00893	0.106	0.00893	mg/kg	09.04.17 17:37	U	18
1,2-Dibromo-3-Chloropropane	96-12-8	<0.0329	0.106	0.0329	mg/kg	09.04.17 17:37	U	18
Dibromochloromethane	124-48-1	<0.0100	0.106	0.0100	mg/kg	09.04.17 17:37	U	18
1,2-Dibromoethane	106-93-4	<0.00899	0.106	0.00899	mg/kg	09.04.17 17:37	U	18
Dibromomethane	74-95-3	<0.00748	0.106	0.00748	mg/kg	09.04.17 17:37	U	18
1,2-Dichlorobenzene	95-50-1	<0.00915	0.106	0.00915	mg/kg	09.04.17 17:37	U	18
1,3-Dichlorobenzene	541-73-1	<0.00789	0.106	0.00789	mg/kg	09.04.17 17:37	U	18
1,4-Dichlorobenzene	106-46-7	<0.00505	0.106	0.00505	mg/kg	09.04.17 17:37	U	18
Dichlorodifluoromethane	75-71-8	<0.00904	0.106	0.00904	mg/kg	09.04.17 17:37	U	18
1,2-Dichloroethane	107-06-2	<0.00745	0.106	0.00745	mg/kg	09.04.17 17:37	U	18
1,1-Dichloroethane	75-34-3	<0.00427	0.106	0.00427	mg/kg	09.04.17 17:37	U	18
trans-1,2-dichloroethene	156-60-5	<0.00621	0.106	0.00621	mg/kg	09.04.17 17:37	U	18
cis-1,2-Dichloroethene	156-59-2	<0.00722	0.106	0.00722	mg/kg	09.04.17 17:37	U	18
1,1-Dichloroethene	75-35-4	<0.00504	0.106	0.00504	mg/kg	09.04.17 17:37	U	18
2,2-Dichloropropane	594-20-7	<0.0251	0.106	0.0251	mg/kg	09.04.17 17:37	U	18
1,3-Dichloropropane	142-28-9	<0.00531	0.106	0.00531	mg/kg	09.04.17 17:37	U	18
1,2-Dichloropropane	78-87-5	<0.0100	0.106	0.0100	mg/kg	09.04.17 17:37	U	18
trans-1,3-dichloropropene	10061-02-6	<0.00645	0.106	0.00645	mg/kg	09.04.17 17:37	U	18
1,1-Dichloropropene	563-58-6	<0.00899	0.106	0.00899	mg/kg	09.04.17 17:37	U	18
cis-1,3-Dichloropropene	10061-01-5	<0.00908	0.106	0.00908	mg/kg	09.04.17 17:37	U	18
Ethylbenzene	100-41-4	0.191	0.106	0.00913	mg/kg	09.04.17 17:37		18
Hexachlorobutadiene	87-68-3	<0.0425	0.106	0.0425	mg/kg	09.04.17 17:37	U	18
isopropylbenzene	98-82-8	0.368	0.106	0.00355	mg/kg	09.04.17 17:37		18
Methylene Chloride	75-09-2	<0.106	0.425	0.106	mg/kg	09.04.17 17:37	U	18
MTBE	1634-04-4	<0.0212	0.106	0.0212	mg/kg	09.04.17 17:37	U	18
Naphthalene	91-20-3	0.644	0.212	0.0425	mg/kg	09.04.17 17:37		18
n-Propylbenzene	103-65-1	2.04	0.106	0.00380	mg/kg	09.04.17 17:37		18



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-3 (8-10)**

Lab Sample Id: 561295-006

Analytical Method: VOAs by SW-846 8260

Analyst: MCH

Seq Number: 3026678

Matrix: Soil

Date Collected: 08.24.17 12.10

Sample Depth:

Date Received: 08.25.17 15.10

Prep Method: 5035

Tech: MCH

Date Prep: 09.04.17 16.02

Prep seq: 730356

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Styrene	100-42-5	<0.00319	0.106	0.00319	mg/kg	09.04.17 17:37	U	18
1,1,1,2-Tetrachloroethane	630-20-6	<0.00864	0.106	0.00864	mg/kg	09.04.17 17:37	U	18
1,1,2,2-Tetrachloroethane	79-34-5	<0.00974	0.106	0.00974	mg/kg	09.04.17 17:37	U	18
Tetrachloroethylene	127-18-4	<0.00543	0.106	0.00543	mg/kg	09.04.17 17:37	U	18
Toluene	108-88-3	<0.0212	0.106	0.0212	mg/kg	09.04.17 17:37	U	18
1,2,3-Trichlorobenzene	87-61-6	<0.0425	0.106	0.0425	mg/kg	09.04.17 17:37	U	18
1,2,4-Trichlorobenzene	120-82-1	<0.0425	0.106	0.0425	mg/kg	09.04.17 17:37	U	18
1,1,2-Trichloroethane	79-00-5	<0.00692	0.106	0.00692	mg/kg	09.04.17 17:37	U	18
1,1,1-Trichloroethane	71-55-6	<0.00719	0.106	0.00719	mg/kg	09.04.17 17:37	U	18
Trichloroethene	79-01-6	<0.00694	0.106	0.00694	mg/kg	09.04.17 17:37	U	18
Trichlorofluoromethane	75-69-4	<0.0103	0.106	0.0103	mg/kg	09.04.17 17:37	U	18
1,2,3-Trichloropropane	96-18-4	<0.0149	0.106	0.0149	mg/kg	09.04.17 17:37	U	18
1,2,4-Trimethylbenzene	95-63-6	0.0276	0.106	0.00240	mg/kg	09.04.17 17:37	J	18
1,3,5-Trimethylbenzene	108-67-8	0.00934	0.106	0.00844	mg/kg	09.04.17 17:37	J	18
Vinyl Chloride	75-01-4	<0.0176	0.0425	0.0176	mg/kg	09.04.17 17:37	U	18
o-Xylene	95-47-6	<0.0106	0.106	0.0106	mg/kg	09.04.17 17:37	U	18
m,p-Xylenes	179601-23-1	0.0282	0.212	0.0212	mg/kg	09.04.17 17:37	J	18
Total Xylenes	1330-20-7	0.0282		0.0106	mg/kg	09.04.17 17:37	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Dibromofluoromethane	79	53 - 142	%		
1,2-Dichloroethane-D4	98	56 - 150	%		
Toluene-D8	104	70 - 130	%		
4-Bromofluorobenzene	110	68 - 152	%		



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-4 (1-2)**

Matrix: **Soil**

Sample Depth:

Lab Sample Id: **561295-007**

Date Collected: **08.24.17 12.46**

Date Received: **08.25.17 15.10**

Analytical Method: **TPH by Texas1005**

Prep Method: **1005**

Analyst: **ARL**

% Moist: **11.02**

Tech: **ARL**

Seq Number: **3026305**

Date Prep: **08.30.17 16.57**

Prep seq: **730099**

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Range Hydrocarbons	PHC612	<2.34	49.6	2.34	mg/kg	08.30.17 22:45	U	1
C12-C28 Range Hydrocarbons	PHCG1228	<1.61	49.6	1.61	mg/kg	08.30.17 22:45	U	1
C28-C35 Range Hydrocarbons	PHCG2835	<0.672	49.6	0.672	mg/kg	08.30.17 22:45	U	1
Total TPH	PHC635	<0.672		0.672	mg/kg	08.30.17 22:45	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
o-Terphenyl	93	70 - 130	%		
1-Chlorooctane	84	70 - 130	%		

Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-4 (1-2)**

Matrix: **Soil**

Sample Depth:

Lab Sample Id: 561295-007

Date Collected: 08.24.17 12:46

Date Received: 08.25.17 15:10

Analytical Method: VOAs by SW-846 8260

Prep Method: 5035

Analyst: **MCH**

% Moist: 11.02

Tech: **MCH**

Seq Number: 3026581

Date Prep: 09.03.17 15:48

Prep seq: 730314

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000173	0.00551	0.000173	mg/kg	09.03.17 18:36	U	1
Bromobenzene	108-86-1	<0.000483	0.00551	0.000483	mg/kg	09.03.17 18:36	U	1
Bromochloromethane	74-97-5	<0.000523	0.00551	0.000523	mg/kg	09.03.17 18:36	U	1
Bromodichloromethane	75-27-4	<0.000292	0.00551	0.000292	mg/kg	09.03.17 18:36	U	1
Bromoform	75-25-2	<0.000770	0.00551	0.000770	mg/kg	09.03.17 18:36	U	1
Bromomethane	74-83-9	<0.00116	0.00551	0.00116	mg/kg	09.03.17 18:36	U	1
tert-Butylbenzene	98-06-6	<0.000227	0.00551	0.000227	mg/kg	09.03.17 18:36	U	1
Sec-Butylbenzene	135-98-8	<0.000540	0.00551	0.000540	mg/kg	09.03.17 18:36	U	1
n-Butylbenzene	104-51-8	<0.00220	0.00551	0.00220	mg/kg	09.03.17 18:36	U	1
Carbon Tetrachloride	56-23-5	<0.000257	0.00551	0.000257	mg/kg	09.03.17 18:36	U	1
Chlorobenzene	108-90-7	<0.000264	0.00551	0.000264	mg/kg	09.03.17 18:36	U	1
Chloroethane	75-00-3	<0.000604	0.0110	0.000604	mg/kg	09.03.17 18:36	U	1
Chloroform	67-66-3	<0.000322	0.00551	0.000322	mg/kg	09.03.17 18:36	U	1
Chloromethane	74-87-3	<0.000329	0.0110	0.000329	mg/kg	09.03.17 18:36	U	1
2-Chlorotoluene	95-49-8	<0.000432	0.00551	0.000432	mg/kg	09.03.17 18:36	U	1
4-Chlorotoluene	106-43-4	<0.000484	0.00551	0.000484	mg/kg	09.03.17 18:36	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.000463	0.00551	0.000463	mg/kg	09.03.17 18:36	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.00171	0.00551	0.00171	mg/kg	09.03.17 18:36	U	1
Dibromochloromethane	124-48-1	<0.000521	0.00551	0.000521	mg/kg	09.03.17 18:36	U	1
1,2-Dibromoethane	106-93-4	<0.000467	0.00551	0.000467	mg/kg	09.03.17 18:36	U	1
Dibromomethane	74-95-3	<0.000388	0.00551	0.000388	mg/kg	09.03.17 18:36	U	1
1,2-Dichlorobenzene	95-50-1	<0.000475	0.00551	0.000475	mg/kg	09.03.17 18:36	U	1
1,3-Dichlorobenzene	541-73-1	<0.000409	0.00551	0.000409	mg/kg	09.03.17 18:36	U	1
1,4-Dichlorobenzene	106-46-7	<0.000262	0.00551	0.000262	mg/kg	09.03.17 18:36	U	1
Dichlorodifluoromethane	75-71-8	<0.000469	0.00551	0.000469	mg/kg	09.03.17 18:36	U	1
1,2-Dichloroethane	107-06-2	<0.000387	0.00551	0.000387	mg/kg	09.03.17 18:36	U	1
1,1-Dichloroethane	75-34-3	<0.000222	0.00551	0.000222	mg/kg	09.03.17 18:36	U	1
trans-1,2-dichloroethene	156-60-5	<0.000322	0.00551	0.000322	mg/kg	09.03.17 18:36	U	1
cis-1,2-Dichloroethene	156-59-2	<0.000375	0.00551	0.000375	mg/kg	09.03.17 18:36	U	1
1,1-Dichloroethene	75-35-4	<0.000261	0.00551	0.000261	mg/kg	09.03.17 18:36	U	1
2,2-Dichloropropane	594-20-7	<0.00130	0.00551	0.00130	mg/kg	09.03.17 18:36	U	1
1,3-Dichloropropane	142-28-9	<0.000275	0.00551	0.000275	mg/kg	09.03.17 18:36	U	1
1,2-Dichloropropane	78-87-5	<0.000521	0.00551	0.000521	mg/kg	09.03.17 18:36	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000334	0.00551	0.000334	mg/kg	09.03.17 18:36	U	1
1,1-Dichloropropene	563-58-6	<0.000466	0.00551	0.000466	mg/kg	09.03.17 18:36	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000471	0.00551	0.000471	mg/kg	09.03.17 18:36	U	1
Ethylbenzene	100-41-4	<0.000473	0.00551	0.000473	mg/kg	09.03.17 18:36	U	1
Hexachlorobutadiene	87-68-3	<0.00220	0.00551	0.00220	mg/kg	09.03.17 18:36	U	1
isopropylbenzene	98-82-8	<0.000184	0.00551	0.000184	mg/kg	09.03.17 18:36	U	1
Methylene Chloride	75-09-2	<0.00551	0.0220	0.00551	mg/kg	09.03.17 18:36	U	1
MTBE	1634-04-4	<0.00110	0.00551	0.00110	mg/kg	09.03.17 18:36	U	1
Naphthalene	91-20-3	<0.00220	0.0110	0.00220	mg/kg	09.03.17 18:36	U	1
n-Propylbenzene	103-65-1	<0.000197	0.00551	0.000197	mg/kg	09.03.17 18:36	U	1



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-4 (1-2)**

Matrix: **Soil**

Sample Depth:

Lab Sample Id: 561295-007

Date Collected: 08.24.17 12:46

Date Received: 08.25.17 15:10

Analytical Method: VOAs by SW-846 8260

Prep Method: 5035

Analyst: **MCH**

% Moist: 11.02

Tech: **MCH**

Seq Number: 3026581

Date Prep: 09.03.17 15:48

Prep seq: 730314

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Styrene	100-42-5	<0.000165	0.00551	0.000165	mg/kg	09.03.17 18:36	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000448	0.00551	0.000448	mg/kg	09.03.17 18:36	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000505	0.00551	0.000505	mg/kg	09.03.17 18:36	U	1
Tetrachloroethylene	127-18-4	<0.000282	0.00551	0.000282	mg/kg	09.03.17 18:36	U	1
Toluene	108-88-3	<0.00110	0.00551	0.00110	mg/kg	09.03.17 18:36	U	1
1,2,3-Trichlorobenzene	87-61-6	<0.00220	0.00551	0.00220	mg/kg	09.03.17 18:36	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00220	0.00551	0.00220	mg/kg	09.03.17 18:36	U	1
1,1,2-Trichloroethane	79-00-5	<0.000359	0.00551	0.000359	mg/kg	09.03.17 18:36	U	1
1,1,1-Trichloroethane	71-55-6	<0.000373	0.00551	0.000373	mg/kg	09.03.17 18:36	U	1
Trichloroethene	79-01-6	<0.000360	0.00551	0.000360	mg/kg	09.03.17 18:36	U	1
Trichlorofluoromethane	75-69-4	<0.000535	0.00551	0.000535	mg/kg	09.03.17 18:36	U	1
1,2,3-Trichloropropane	96-18-4	<0.000773	0.00551	0.000773	mg/kg	09.03.17 18:36	U	1
1,2,4-Trimethylbenzene	95-63-6	<0.000124	0.00551	0.000124	mg/kg	09.03.17 18:36	U	1
1,3,5-Trimethylbenzene	108-67-8	<0.000438	0.00551	0.000438	mg/kg	09.03.17 18:36	U	1
Vinyl Chloride	75-01-4	<0.000911	0.00220	0.000911	mg/kg	09.03.17 18:36	U	1
o-Xylene	95-47-6	<0.000551	0.00551	0.000551	mg/kg	09.03.17 18:36	U	1
m,p-Xylenes	179601-23-1	<0.00110	0.0110	0.00110	mg/kg	09.03.17 18:36	U	1
Total Xylenes	1330-20-7	<0.000551		0.000551	mg/kg	09.03.17 18:36	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Dibromofluoromethane	99	53 - 142	%		
1,2-Dichloroethane-D4	110	56 - 150	%		
Toluene-D8	102	70 - 130	%		
4-Bromofluorobenzene	104	68 - 152	%		



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-4 (12-14)**

Matrix: **Soil**

Sample Depth:

Lab Sample Id: 561295-008

Date Collected: 08.24.17 13:00

Date Received: 08.25.17 15:10

Analytical Method: TPH by Texas1005

Prep Method: 1005

Analyst: **ARL**

% Moist: 15.07

Tech: **ARL**

Seq Number: 3026305

Date Prep: 08.30.17 17:00

Prep seq: 730099

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Range Hydrocarbons	PHC612	<2.36	49.8	2.36	mg/kg	08.30.17 23:06	U	1
C12-C28 Range Hydrocarbons	PHCG1228	<1.61	49.8	1.61	mg/kg	08.30.17 23:06	U	1
C28-C35 Range Hydrocarbons	PHCG2835	<0.676	49.8	0.676	mg/kg	08.30.17 23:06	U	1
Total TPH	PHC635	<0.676		0.676	mg/kg	08.30.17 23:06	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
o-Terphenyl	87	70 - 130	%		
1-Chlorooctane	82	70 - 130	%		

Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-4 (12-14)**

Matrix: **Soil**

Sample Depth:

Lab Sample Id: 561295-008

Date Collected: 08.24.17 13:00

Date Received: 08.25.17 15:10

Analytical Method: VOAs by SW-846 8260

Prep Method: 5035

Analyst: MCH

% Moist: 15.07

Tech: MCH

Seq Number: 3026678

Date Prep: 09.04.17 14:30

Prep seq: 730356

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.00760	0.00483	0.000152	mg/kg	09.04.17 14:58	X	1
Bromobenzene	108-86-1	<0.000424	0.00483	0.000424	mg/kg	09.04.17 14:58	UX	1
Bromochloromethane	74-97-5	<0.000459	0.00483	0.000459	mg/kg	09.04.17 14:58	U	1
Bromodichloromethane	75-27-4	<0.000257	0.00483	0.000257	mg/kg	09.04.17 14:58	UX	1
Bromoform	75-25-2	<0.000675	0.00483	0.000675	mg/kg	09.04.17 14:58	UX	1
Bromomethane	74-83-9	<0.00102	0.00483	0.00102	mg/kg	09.04.17 14:58	UX	1
tert-Butylbenzene	98-06-6	<0.000200	0.00483	0.000200	mg/kg	09.04.17 14:58	U	1
Sec-Butylbenzene	135-98-8	<0.000474	0.00483	0.000474	mg/kg	09.04.17 14:58	U	1
n-Butylbenzene	104-51-8	<0.00193	0.00483	0.00193	mg/kg	09.04.17 14:58	U	1
Carbon Tetrachloride	56-23-5	<0.000226	0.00483	0.000226	mg/kg	09.04.17 14:58	U	1
Chlorobenzene	108-90-7	<0.000231	0.00483	0.000231	mg/kg	09.04.17 14:58	U	1
Chloroethane	75-00-3	<0.000530	0.00967	0.000530	mg/kg	09.04.17 14:58	U	1
Chloroform	67-66-3	<0.000283	0.00483	0.000283	mg/kg	09.04.17 14:58	UX	1
Chloromethane	74-87-3	<0.000289	0.00967	0.000289	mg/kg	09.04.17 14:58	UX	1
2-Chlorotoluene	95-49-8	<0.000379	0.00483	0.000379	mg/kg	09.04.17 14:58	U	1
4-Chlorotoluene	106-43-4	<0.000425	0.00483	0.000425	mg/kg	09.04.17 14:58	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.000406	0.00483	0.000406	mg/kg	09.04.17 14:58	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.00150	0.00483	0.00150	mg/kg	09.04.17 14:58	U	1
Dibromochloromethane	124-48-1	<0.000457	0.00483	0.000457	mg/kg	09.04.17 14:58	UX	1
1,2-Dibromoethane	106-93-4	<0.000409	0.00483	0.000409	mg/kg	09.04.17 14:58	U	1
Dibromomethane	74-95-3	<0.000341	0.00483	0.000341	mg/kg	09.04.17 14:58	U	1
1,2-Dichlorobenzene	95-50-1	<0.000417	0.00483	0.000417	mg/kg	09.04.17 14:58	UX	1
1,3-Dichlorobenzene	541-73-1	<0.000359	0.00483	0.000359	mg/kg	09.04.17 14:58	U	1
1,4-Dichlorobenzene	106-46-7	<0.000230	0.00483	0.000230	mg/kg	09.04.17 14:58	U	1
Dichlorodifluoromethane	75-71-8	<0.000411	0.00483	0.000411	mg/kg	09.04.17 14:58	U	1
1,2-Dichloroethane	107-06-2	<0.000339	0.00483	0.000339	mg/kg	09.04.17 14:58	U	1
1,1-Dichloroethane	75-34-3	<0.000194	0.00483	0.000194	mg/kg	09.04.17 14:58	UX	1
trans-1,2-dichloroethene	156-60-5	<0.000283	0.00483	0.000283	mg/kg	09.04.17 14:58	U	1
cis-1,2-Dichloroethene	156-59-2	<0.000329	0.00483	0.000329	mg/kg	09.04.17 14:58	U	1
1,1-Dichloroethene	75-35-4	<0.000229	0.00483	0.000229	mg/kg	09.04.17 14:58	U	1
2,2-Dichloropropane	594-20-7	<0.00114	0.00483	0.00114	mg/kg	09.04.17 14:58	U	1
1,3-Dichloropropane	142-28-9	<0.000242	0.00483	0.000242	mg/kg	09.04.17 14:58	UX	1
1,2-Dichloropropane	78-87-5	<0.000457	0.00483	0.000457	mg/kg	09.04.17 14:58	UX	1
trans-1,3-dichloropropene	10061-02-6	<0.000293	0.00483	0.000293	mg/kg	09.04.17 14:58	U	1
1,1-Dichloropropene	563-58-6	<0.000409	0.00483	0.000409	mg/kg	09.04.17 14:58	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000413	0.00483	0.000413	mg/kg	09.04.17 14:58	UX	1
Ethylbenzene	100-41-4	<0.000415	0.00483	0.000415	mg/kg	09.04.17 14:58	U	1
Hexachlorobutadiene	87-68-3	<0.00193	0.00483	0.00193	mg/kg	09.04.17 14:58	U	1
isopropylbenzene	98-82-8	<0.000162	0.00483	0.000162	mg/kg	09.04.17 14:58	U	1
Methylene Chloride	75-09-2	<0.00483	0.0193	0.00483	mg/kg	09.04.17 14:58	UX	1
MTBE	1634-04-4	0.000996	0.00483	0.000967	mg/kg	09.04.17 14:58	J	1
Naphthalene	91-20-3	<0.00193	0.00967	0.00193	mg/kg	09.04.17 14:58	U	1
n-Propylbenzene	103-65-1	<0.000173	0.00483	0.000173	mg/kg	09.04.17 14:58	U	1



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-4 (12-14)**

Matrix: **Soil**

Sample Depth:

Lab Sample Id: 561295-008

Date Collected: 08.24.17 13:00

Date Received: 08.25.17 15:10

Analytical Method: VOAs by SW-846 8260

Prep Method: 5035

Analyst: **MCH**

% Moist: 15.07

Tech: **MCH**

Seq Number: 3026678

Date Prep: 09.04.17 14:30

Prep seq: 730356

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Styrene	100-42-5	<0.000145	0.00483	0.000145	mg/kg	09.04.17 14:58	UX	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000393	0.00483	0.000393	mg/kg	09.04.17 14:58	UX	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000443	0.00483	0.000443	mg/kg	09.04.17 14:58	UX	1
Tetrachloroethylene	127-18-4	<0.000247	0.00483	0.000247	mg/kg	09.04.17 14:58	U	1
Toluene	108-88-3	<0.000967	0.00483	0.000967	mg/kg	09.04.17 14:58	U	1
1,2,3-Trichlorobenzene	87-61-6	<0.00193	0.00483	0.00193	mg/kg	09.04.17 14:58	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00193	0.00483	0.00193	mg/kg	09.04.17 14:58	U	1
1,1,2-Trichloroethane	79-00-5	<0.000315	0.00483	0.000315	mg/kg	09.04.17 14:58	U	1
1,1,1-Trichloroethane	71-55-6	<0.000327	0.00483	0.000327	mg/kg	09.04.17 14:58	U	1
Trichloroethene	79-01-6	<0.000316	0.00483	0.000316	mg/kg	09.04.17 14:58	U	1
Trichlorofluoromethane	75-69-4	<0.000469	0.00483	0.000469	mg/kg	09.04.17 14:58	U	1
1,2,3-Trichloropropane	96-18-4	<0.000678	0.00483	0.000678	mg/kg	09.04.17 14:58	U	1
1,2,4-Trimethylbenzene	95-63-6	<0.000109	0.00483	0.000109	mg/kg	09.04.17 14:58	U	1
1,3,5-Trimethylbenzene	108-67-8	<0.000384	0.00483	0.000384	mg/kg	09.04.17 14:58	U	1
Vinyl Chloride	75-01-4	<0.000799	0.00193	0.000799	mg/kg	09.04.17 14:58	UX	1
o-Xylene	95-47-6	<0.000483	0.00483	0.000483	mg/kg	09.04.17 14:58	U	1
m,p-Xylenes	179601-23-1	<0.000967	0.00967	0.000967	mg/kg	09.04.17 14:58	U	1
Total Xylenes	1330-20-7	<0.000483		0.000483	mg/kg	09.04.17 14:58	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Dibromofluoromethane	96	53 - 142	%		
1,2-Dichloroethane-D4	107	56 - 150	%		
Toluene-D8	103	70 - 130	%		
4-Bromofluorobenzene	108	68 - 152	%		



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-5 (2-4)**

Matrix: **Soil**

Sample Depth:

Lab Sample Id: 561295-009

Date Collected: 08.24.17 13.30

Date Received: 08.25.17 15.10

Analytical Method: TPH by Texas1005

Prep Method: 1005

Analyst: **ARL**

% Moist: 14.69

Tech: **ARL**

Seq Number: 3026305

Date Prep: 08.30.17 17.03

Prep seq: 730099

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Range Hydrocarbons	PHC612	<2.28	48.4	2.28	mg/kg	08.30.17 23:26	U	1
C12-C28 Range Hydrocarbons	PHCG1228	<1.57	48.4	1.57	mg/kg	08.30.17 23:26	U	1
C28-C35 Range Hydrocarbons	PHCG2835	<0.655	48.4	0.655	mg/kg	08.30.17 23:26	U	1
Total TPH	PHC635	<0.655		0.655	mg/kg	08.30.17 23:26	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
o-Terphenyl	97	70 - 130	%		
1-Chlorooctane	88	70 - 130	%		

Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-5 (2-4)**

Matrix: **Soil**

Sample Depth:

Lab Sample Id: 561295-009

Date Collected: 08.24.17 13:30

Date Received: 08.25.17 15:10

Analytical Method: VOAs by SW-846 8260

Prep Method: 5035

Analyst: **MCH**

% Moist: 14.69

Tech: **MCH**

Seq Number: 3026581

Date Prep: 09.03.17 15:47

Prep seq: 730314

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.00115	0.00389	0.000122	mg/kg	09.03.17 18:13	J	1
Bromobenzene	108-86-1	<0.000341	0.00389	0.000341	mg/kg	09.03.17 18:13	U	1
Bromochloromethane	74-97-5	<0.000370	0.00389	0.000370	mg/kg	09.03.17 18:13	U	1
Bromodichloromethane	75-27-4	<0.000207	0.00389	0.000207	mg/kg	09.03.17 18:13	U	1
Bromoform	75-25-2	<0.000544	0.00389	0.000544	mg/kg	09.03.17 18:13	U	1
Bromomethane	74-83-9	<0.000822	0.00389	0.000822	mg/kg	09.03.17 18:13	U	1
tert-Butylbenzene	98-06-6	<0.000161	0.00389	0.000161	mg/kg	09.03.17 18:13	U	1
Sec-Butylbenzene	135-98-8	<0.000382	0.00389	0.000382	mg/kg	09.03.17 18:13	U	1
n-Butylbenzene	104-51-8	<0.00156	0.00389	0.00156	mg/kg	09.03.17 18:13	U	1
Carbon Tetrachloride	56-23-5	<0.000182	0.00389	0.000182	mg/kg	09.03.17 18:13	U	1
Chlorobenzene	108-90-7	<0.000186	0.00389	0.000186	mg/kg	09.03.17 18:13	U	1
Chloroethane	75-00-3	<0.000427	0.00778	0.000427	mg/kg	09.03.17 18:13	U	1
Chloroform	67-66-3	<0.000228	0.00389	0.000228	mg/kg	09.03.17 18:13	U	1
Chloromethane	74-87-3	<0.000232	0.00778	0.000232	mg/kg	09.03.17 18:13	U	1
2-Chlorotoluene	95-49-8	<0.000305	0.00389	0.000305	mg/kg	09.03.17 18:13	U	1
4-Chlorotoluene	106-43-4	<0.000342	0.00389	0.000342	mg/kg	09.03.17 18:13	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.000327	0.00389	0.000327	mg/kg	09.03.17 18:13	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.00121	0.00389	0.00121	mg/kg	09.03.17 18:13	U	1
Dibromochloromethane	124-48-1	<0.000368	0.00389	0.000368	mg/kg	09.03.17 18:13	U	1
1,2-Dibromoethane	106-93-4	<0.000330	0.00389	0.000330	mg/kg	09.03.17 18:13	U	1
Dibromomethane	74-95-3	<0.000274	0.00389	0.000274	mg/kg	09.03.17 18:13	U	1
1,2-Dichlorobenzene	95-50-1	<0.000335	0.00389	0.000335	mg/kg	09.03.17 18:13	U	1
1,3-Dichlorobenzene	541-73-1	<0.000289	0.00389	0.000289	mg/kg	09.03.17 18:13	U	1
1,4-Dichlorobenzene	106-46-7	<0.000185	0.00389	0.000185	mg/kg	09.03.17 18:13	U	1
Dichlorodifluoromethane	75-71-8	<0.000331	0.00389	0.000331	mg/kg	09.03.17 18:13	U	1
1,2-Dichloroethane	107-06-2	<0.000273	0.00389	0.000273	mg/kg	09.03.17 18:13	U	1
1,1-Dichloroethane	75-34-3	<0.000157	0.00389	0.000157	mg/kg	09.03.17 18:13	U	1
trans-1,2-dichloroethene	156-60-5	<0.000228	0.00389	0.000228	mg/kg	09.03.17 18:13	U	1
cis-1,2-Dichloroethene	156-59-2	<0.000265	0.00389	0.000265	mg/kg	09.03.17 18:13	U	1
1,1-Dichloroethene	75-35-4	<0.000185	0.00389	0.000185	mg/kg	09.03.17 18:13	U	1
2,2-Dichloropropane	594-20-7	<0.000921	0.00389	0.000921	mg/kg	09.03.17 18:13	U	1
1,3-Dichloropropane	142-28-9	<0.000195	0.00389	0.000195	mg/kg	09.03.17 18:13	U	1
1,2-Dichloropropane	78-87-5	<0.000368	0.00389	0.000368	mg/kg	09.03.17 18:13	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000236	0.00389	0.000236	mg/kg	09.03.17 18:13	U	1
1,1-Dichloropropene	563-58-6	<0.000329	0.00389	0.000329	mg/kg	09.03.17 18:13	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000333	0.00389	0.000333	mg/kg	09.03.17 18:13	U	1
Ethylbenzene	100-41-4	<0.000334	0.00389	0.000334	mg/kg	09.03.17 18:13	U	1
Hexachlorobutadiene	87-68-3	<0.00156	0.00389	0.00156	mg/kg	09.03.17 18:13	U	1
isopropylbenzene	98-82-8	0.00205	0.00389	0.000130	mg/kg	09.03.17 18:13	J	1
Methylene Chloride	75-09-2	<0.00389	0.0156	0.00389	mg/kg	09.03.17 18:13	U	1
MTBE	1634-04-4	<0.000778	0.00389	0.000778	mg/kg	09.03.17 18:13	U	1
Naphthalene	91-20-3	<0.00156	0.00778	0.00156	mg/kg	09.03.17 18:13	U	1
n-Propylbenzene	103-65-1	0.00107	0.00389	0.000139	mg/kg	09.03.17 18:13	J	1



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-5 (2-4)**

Matrix: **Soil**

Sample Depth:

Lab Sample Id: 561295-009

Date Collected: 08.24.17 13:30

Date Received: 08.25.17 15:10

Analytical Method: VOAs by SW-846 8260

Prep Method: 5035

Analyst: **MCH**

% Moist: 14.69

Tech: **MCH**

Seq Number: 3026581

Date Prep: 09.03.17 15:47

Prep seq: 730314

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Styrene	100-42-5	<0.000117	0.00389	0.000117	mg/kg	09.03.17 18:13	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000317	0.00389	0.000317	mg/kg	09.03.17 18:13	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000357	0.00389	0.000357	mg/kg	09.03.17 18:13	U	1
Tetrachloroethylene	127-18-4	<0.000199	0.00389	0.000199	mg/kg	09.03.17 18:13	U	1
Toluene	108-88-3	<0.000778	0.00389	0.000778	mg/kg	09.03.17 18:13	U	1
1,2,3-Trichlorobenzene	87-61-6	<0.00156	0.00389	0.00156	mg/kg	09.03.17 18:13	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00156	0.00389	0.00156	mg/kg	09.03.17 18:13	U	1
1,1,2-Trichloroethane	79-00-5	<0.000253	0.00389	0.000253	mg/kg	09.03.17 18:13	U	1
1,1,1-Trichloroethane	71-55-6	<0.000264	0.00389	0.000264	mg/kg	09.03.17 18:13	U	1
Trichloroethene	79-01-6	<0.000255	0.00389	0.000255	mg/kg	09.03.17 18:13	U	1
Trichlorofluoromethane	75-69-4	<0.000378	0.00389	0.000378	mg/kg	09.03.17 18:13	U	1
1,2,3-Trichloropropane	96-18-4	<0.000546	0.00389	0.000546	mg/kg	09.03.17 18:13	U	1
1,2,4-Trimethylbenzene	95-63-6	<0.0000879	0.00389	0.0000879	mg/kg	09.03.17 18:13	U	1
1,3,5-Trimethylbenzene	108-67-8	<0.000309	0.00389	0.000309	mg/kg	09.03.17 18:13	U	1
Vinyl Chloride	75-01-4	<0.000644	0.00156	0.000644	mg/kg	09.03.17 18:13	U	1
o-Xylene	95-47-6	<0.000389	0.00389	0.000389	mg/kg	09.03.17 18:13	U	1
m,p-Xylenes	179601-23-1	<0.000778	0.00778	0.000778	mg/kg	09.03.17 18:13	U	1
Total Xylenes	1330-20-7	<0.000389		0.000389	mg/kg	09.03.17 18:13	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Dibromofluoromethane	81	53 - 142	%		
1,2-Dichloroethane-D4	92	56 - 150	%		
Toluene-D8	108	70 - 130	%		
4-Bromofluorobenzene	109	68 - 152	%		



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-5 (10-12)**

Matrix: **Soil**

Sample Depth:

Lab Sample Id: 561295-010

Date Collected: 08.24.17 13.50

Date Received: 08.25.17 15.10

Analytical Method: TPH by Texas1005

Prep Method: 1005

Analyst: ARL

% Moist: 16.12

Tech: ARL

Seq Number: 3026305

Date Prep: 08.30.17 17.06

Prep seq: 730099

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Range Hydrocarbons	PHC612	43.4	44.5	2.10	mg/kg	08.31.17 15:36	J	1
C12-C28 Range Hydrocarbons	PHCG1228	15.7	44.5	1.44	mg/kg	08.31.17 15:36	J	1
C28-C35 Range Hydrocarbons	PHCG2835	<0.603	44.5	0.603	mg/kg	08.31.17 15:36	U	1
Total TPH	PHC635	59.1		0.603	mg/kg	08.31.17 15:36		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
o-Terphenyl	79	70 - 130	%		
1-Chlorooctane	77	70 - 130	%		

Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: TSP-5 (10-12)	Matrix: Soil	Sample Depth:
Lab Sample Id: 561295-010	Date Collected: 08.24.17 13.50	Date Received: 08.25.17 15.10
Analytical Method: VOAs by SW-846 8260		Prep Method: 5035
Analyst: MCH	% Moist: 16.12	Tech: MCH
Seq Number: 3026678	Date Prep: 09.04.17 16.03	
	Prep seq: 730356	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.0325	0.102	0.00319	mg/kg	09.04.17 17:59	J	17
Bromobenzene	108-86-1	<0.00891	0.102	0.00891	mg/kg	09.04.17 17:59	U	17
Bromochloromethane	74-97-5	<0.00966	0.102	0.00966	mg/kg	09.04.17 17:59	U	17
Bromodichloromethane	75-27-4	<0.00540	0.102	0.00540	mg/kg	09.04.17 17:59	U	17
Bromoform	75-25-2	<0.0142	0.102	0.0142	mg/kg	09.04.17 17:59	U	17
Bromomethane	74-83-9	<0.0215	0.102	0.0215	mg/kg	09.04.17 17:59	U	17
tert-Butylbenzene	98-06-6	<0.00420	0.102	0.00420	mg/kg	09.04.17 17:59	U	17
Sec-Butylbenzene	135-98-8	0.0594	0.102	0.00997	mg/kg	09.04.17 17:59	J	17
n-Butylbenzene	104-51-8	0.255	0.102	0.0407	mg/kg	09.04.17 17:59		17
Carbon Tetrachloride	56-23-5	<0.00475	0.102	0.00475	mg/kg	09.04.17 17:59	U	17
Chlorobenzene	108-90-7	<0.00486	0.102	0.00486	mg/kg	09.04.17 17:59	U	17
Chloroethane	75-00-3	<0.0112	0.203	0.0112	mg/kg	09.04.17 17:59	U	17
Chloroform	67-66-3	<0.00595	0.102	0.00595	mg/kg	09.04.17 17:59	U	17
Chloromethane	74-87-3	<0.00607	0.203	0.00607	mg/kg	09.04.17 17:59	U	17
2-Chlorotoluene	95-49-8	<0.00798	0.102	0.00798	mg/kg	09.04.17 17:59	U	17
4-Chlorotoluene	106-43-4	<0.00893	0.102	0.00893	mg/kg	09.04.17 17:59	U	17
p-Cymene (p-Isopropyltoluene)	99-87-6	0.0730	0.102	0.00855	mg/kg	09.04.17 17:59	J	17
1,2-Dibromo-3-Chloropropane	96-12-8	<0.0315	0.102	0.0315	mg/kg	09.04.17 17:59	U	17
Dibromochloromethane	124-48-1	<0.00961	0.102	0.00961	mg/kg	09.04.17 17:59	U	17
1,2-Dibromoethane	106-93-4	<0.00861	0.102	0.00861	mg/kg	09.04.17 17:59	U	17
Dibromomethane	74-95-3	<0.00716	0.102	0.00716	mg/kg	09.04.17 17:59	U	17
1,2-Dichlorobenzene	95-50-1	<0.00876	0.102	0.00876	mg/kg	09.04.17 17:59	U	17
1,3-Dichlorobenzene	541-73-1	<0.00755	0.102	0.00755	mg/kg	09.04.17 17:59	U	17
1,4-Dichlorobenzene	106-46-7	<0.00483	0.102	0.00483	mg/kg	09.04.17 17:59	U	17
Dichlorodifluoromethane	75-71-8	<0.00865	0.102	0.00865	mg/kg	09.04.17 17:59	U	17
1,2-Dichloroethane	107-06-2	<0.00713	0.102	0.00713	mg/kg	09.04.17 17:59	U	17
1,1-Dichloroethane	75-34-3	<0.00409	0.102	0.00409	mg/kg	09.04.17 17:59	U	17
trans-1,2-dichloroethene	156-60-5	<0.00595	0.102	0.00595	mg/kg	09.04.17 17:59	U	17
cis-1,2-Dichloroethene	156-59-2	<0.00692	0.102	0.00692	mg/kg	09.04.17 17:59	U	17
1,1-Dichloroethene	75-35-4	<0.00482	0.102	0.00482	mg/kg	09.04.17 17:59	U	17
2,2-Dichloropropane	594-20-7	<0.0241	0.102	0.0241	mg/kg	09.04.17 17:59	U	17
1,3-Dichloropropane	142-28-9	<0.00508	0.102	0.00508	mg/kg	09.04.17 17:59	U	17
1,2-Dichloropropane	78-87-5	<0.00961	0.102	0.00961	mg/kg	09.04.17 17:59	U	17
trans-1,3-dichloropropene	10061-02-6	<0.00617	0.102	0.00617	mg/kg	09.04.17 17:59	U	17
1,1-Dichloropropene	563-58-6	<0.00860	0.102	0.00860	mg/kg	09.04.17 17:59	U	17
cis-1,3-Dichloropropene	10061-01-5	<0.00869	0.102	0.00869	mg/kg	09.04.17 17:59	U	17
Ethylbenzene	100-41-4	0.325	0.102	0.00874	mg/kg	09.04.17 17:59		17
Hexachlorobutadiene	87-68-3	<0.0407	0.102	0.0407	mg/kg	09.04.17 17:59	U	17
isopropylbenzene	98-82-8	0.132	0.102	0.00340	mg/kg	09.04.17 17:59		17
Methylene Chloride	75-09-2	<0.102	0.407	0.102	mg/kg	09.04.17 17:59	U	17
MTBE	1634-04-4	<0.0203	0.102	0.0203	mg/kg	09.04.17 17:59	U	17
Naphthalene	91-20-3	0.361	0.203	0.0407	mg/kg	09.04.17 17:59		17
n-Propylbenzene	103-65-1	0.576	0.102	0.00364	mg/kg	09.04.17 17:59		17



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-5 (10-12)**

Matrix: Soil

Sample Depth:

Lab Sample Id: 561295-010

Date Collected: 08.24.17 13.50

Date Received: 08.25.17 15.10

Analytical Method: VOAs by SW-846 8260

Prep Method: 5035

Analyst: MCH

% Moist: 16.12

Tech: MCH

Seq Number: 3026678

Date Prep: 09.04.17 16.03

Prep seq: 730356

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Styrene	100-42-5	<0.00305	0.102	0.00305	mg/kg	09.04.17 17:59	U	17
1,1,1,2-Tetrachloroethane	630-20-6	<0.00827	0.102	0.00827	mg/kg	09.04.17 17:59	U	17
1,1,2,2-Tetrachloroethane	79-34-5	<0.00932	0.102	0.00932	mg/kg	09.04.17 17:59	U	17
Tetrachloroethylene	127-18-4	<0.00520	0.102	0.00520	mg/kg	09.04.17 17:59	U	17
Toluene	108-88-3	<0.0203	0.102	0.0203	mg/kg	09.04.17 17:59	U	17
1,2,3-Trichlorobenzene	87-61-6	<0.0407	0.102	0.0407	mg/kg	09.04.17 17:59	U	17
1,2,4-Trichlorobenzene	120-82-1	<0.0407	0.102	0.0407	mg/kg	09.04.17 17:59	U	17
1,1,2-Trichloroethane	79-00-5	<0.00662	0.102	0.00662	mg/kg	09.04.17 17:59	U	17
1,1,1-Trichloroethane	71-55-6	<0.00689	0.102	0.00689	mg/kg	09.04.17 17:59	U	17
Trichloroethene	79-01-6	<0.00665	0.102	0.00665	mg/kg	09.04.17 17:59	U	17
Trichlorofluoromethane	75-69-4	<0.00987	0.102	0.00987	mg/kg	09.04.17 17:59	U	17
1,2,3-Trichloropropane	96-18-4	<0.0143	0.102	0.0143	mg/kg	09.04.17 17:59	U	17
1,2,4-Trimethylbenzene	95-63-6	0.0321	0.102	0.00230	mg/kg	09.04.17 17:59	J	17
1,3,5-Trimethylbenzene	108-67-8	<0.00808	0.102	0.00808	mg/kg	09.04.17 17:59	U	17
Vinyl Chloride	75-01-4	<0.0168	0.0407	0.0168	mg/kg	09.04.17 17:59	U	17
o-Xylene	95-47-6	<0.0102	0.102	0.0102	mg/kg	09.04.17 17:59	U	17
m,p-Xylenes	179601-23-1	0.0329	0.203	0.0203	mg/kg	09.04.17 17:59	J	17
Total Xylenes	1330-20-7	0.0329		0.0102	mg/kg	09.04.17 17:59	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Dibromofluoromethane	75	53 - 142	%		
1,2-Dichloroethane-D4	96	56 - 150	%		
Toluene-D8	106	70 - 130	%		
4-Bromofluorobenzene	110	68 - 152	%		



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-1**

Matrix: Ground Water

Sample Depth:

Lab Sample Id: 561295-011

Date Collected: 08.24.17 14:30

Date Received: 08.25.17 15:10

Analytical Method: TPH by Texas1005

Prep Method: 1005

Analyst: ARL

% Moist:

Tech: ARL

Seq Number: 3026360

Date Prep: 08.25.17 16:00

Prep seq: 729947

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Range Hydrocarbons	PHC612	25.4	6.13	0.196	mg/L	08.31.17 14:34		1
C12-C28 Range Hydrocarbons	PHCG1228	1.99	6.13	0.202	mg/L	08.31.17 14:34	J	1
C28-C35 Range Hydrocarbons	PHCG2835	<0.124	6.13	0.124	mg/L	08.31.17 14:34	U	1
Total TPH	PHC635	27.4		0.124	mg/L	08.31.17 14:34		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
o-Terphenyl	87	70 - 130	%		
1-Chlorooctane	88	70 - 130	%		

Certificate of Analytical Results

561295


Terracon Houston, Houston, TX

0.43 Acres of Land

 Sample Id: **TSP-1**

Lab Sample Id: 561295-011

Matrix: Ground Water

Sample Depth:

Date Received: 08.25.17 15.10

Analytical Method: VOAs by SW-846 8260

Prep Method: 5030B

Analyst: MCH

Tech: MCH

Seq Number: 3026802

Date Prep: 09.05.17 17.28

Prep seq: 730433

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.0612	0.0500	0.00185	mg/L	09.05.17 20:40		10
Bromobenzene	108-86-1	<0.00258	0.0500	0.00258	mg/L	09.05.17 20:40	U	10
Bromochloromethane	74-97-5	<0.00328	0.0500	0.00328	mg/L	09.05.17 20:40	U	10
Bromodichloromethane	75-27-4	<0.00164	0.0500	0.00164	mg/L	09.05.17 20:40	U	10
Bromoform	75-25-2	<0.00348	0.0500	0.00348	mg/L	09.05.17 20:40	U	10
Bromomethane	74-83-9	<0.00127	0.0500	0.00127	mg/L	09.05.17 20:40	U	10
n-Butylbenzene	104-51-8	<0.0200	0.0500	0.0200	mg/L	09.05.17 20:40	U	10
Sec-Butylbenzene	135-98-8	0.00510	0.0500	0.00124	mg/L	09.05.17 20:40	J	10
tert-Butylbenzene	98-06-6	<0.00177	0.0500	0.00177	mg/L	09.05.17 20:40	U	10
Carbon Tetrachloride	56-23-5	<0.00243	0.0500	0.00243	mg/L	09.05.17 20:40	U	10
Chlorobenzene	108-90-7	<0.00110	0.0500	0.00110	mg/L	09.05.17 20:40	U	10
Chloroethane	75-00-3	<0.00190	0.100	0.00190	mg/L	09.05.17 20:40	U	10
Chloroform	67-66-3	<0.00107	0.0500	0.00107	mg/L	09.05.17 20:40	U	10
Chloromethane	74-87-3	<0.0500	0.100	0.0500	mg/L	09.05.17 20:40	U	10
2-Chlorotoluene	95-49-8	<0.00293	0.0500	0.00293	mg/L	09.05.17 20:40	U	10
4-Chlorotoluene	106-43-4	<0.00114	0.0500	0.00114	mg/L	09.05.17 20:40	U	10
p-Cymene (p-Isopropyltoluene)	99-87-6	0.00400	0.0500	0.00150	mg/L	09.05.17 20:40	J	10
Dibromochloromethane	124-48-1	<0.00212	0.0500	0.00212	mg/L	09.05.17 20:40	U	10
1,2-Dibromo-3-Chloropropane	96-12-8	<0.00707	0.0500	0.00707	mg/L	09.05.17 20:40	U	10
1,2-Dibromoethane	106-93-4	<0.00380	0.0500	0.00380	mg/L	09.05.17 20:40	U	10
Dibromomethane	74-95-3	<0.00186	0.0500	0.00186	mg/L	09.05.17 20:40	U	10
1,2-Dichlorobenzene	95-50-1	<0.00175	0.0500	0.00175	mg/L	09.05.17 20:40	U	10
1,3-Dichlorobenzene	541-73-1	<0.00169	0.0500	0.00169	mg/L	09.05.17 20:40	U	10
1,4-Dichlorobenzene	106-46-7	<0.00222	0.0500	0.00222	mg/L	09.05.17 20:40	U	10
Dichlorodifluoromethane	75-71-8	<0.00148	0.0500	0.00148	mg/L	09.05.17 20:40	U	10
1,1-Dichloroethane	75-34-3	<0.00182	0.0500	0.00182	mg/L	09.05.17 20:40	U	10
1,2-Dichloroethane	107-06-2	<0.00283	0.0500	0.00283	mg/L	09.05.17 20:40	U	10
1,1-Dichloroethene	75-35-4	<0.00178	0.0500	0.00178	mg/L	09.05.17 20:40	U	10
cis-1,2-Dichloroethene	156-59-2	<0.00162	0.0500	0.00162	mg/L	09.05.17 20:40	U	10
trans-1,2-dichloroethene	156-60-5	<0.00167	0.0500	0.00167	mg/L	09.05.17 20:40	U	10
1,2-Dichloropropane	78-87-5	<0.00170	0.0500	0.00170	mg/L	09.05.17 20:40	U	10
1,3-Dichloropropane	142-28-9	<0.00199	0.0500	0.00199	mg/L	09.05.17 20:40	U	10
2,2-Dichloropropane	594-20-7	<0.00154	0.0500	0.00154	mg/L	09.05.17 20:40	U	10
1,1-Dichloropropene	563-58-6	<0.00257	0.0500	0.00257	mg/L	09.05.17 20:40	U	10
cis-1,3-Dichloropropene	10061-01-5	<0.00126	0.0500	0.00126	mg/L	09.05.17 20:40	U	10
trans-1,3-dichloropropene	10061-02-6	<0.00198	0.0500	0.00198	mg/L	09.05.17 20:40	U	10
Ethylbenzene	100-41-4	0.161	0.0500	0.00190	mg/L	09.05.17 20:40		10
Hexachlorobutadiene	87-68-3	<0.0200	0.0500	0.0200	mg/L	09.05.17 20:40	U	10
isopropylbenzene	98-82-8	0.0103	0.0500	0.00218	mg/L	09.05.17 20:40	J	10
Methylene Chloride	75-09-2	<0.0200	0.0500	0.0200	mg/L	09.05.17 20:40	U	10
MTBE	1634-04-4	0.175	0.0500	0.00500	mg/L	09.05.17 20:40		10
Naphthalene	91-20-3	0.0790	0.100	0.0200	mg/L	09.05.17 20:40	J	10
n-Propylbenzene	103-65-1	0.0366	0.0500	0.00173	mg/L	09.05.17 20:40	J	10



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-1**

Lab Sample Id: 561295-011

Analytical Method: VOAs by SW-846 8260

Analyst: MCH

Seq Number: 3026802

Matrix: Ground Water

Date Collected: 08.24.17 14.30

Sample Depth:

Date Received: 08.25.17 15.10

Prep Method: 5030B

Tech: MCH

Date Prep: 09.05.17 17.28

Prep seq: 730433

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Styrene	100-42-5	<0.00197	0.0500	0.00197	mg/L	09.05.17 20:40	U	10
1,1,1,2-Tetrachloroethane	630-20-6	<0.00195	0.0500	0.00195	mg/L	09.05.17 20:40	U	10
1,1,2,2-Tetrachloroethane	79-34-5	<0.00365	0.0500	0.00365	mg/L	09.05.17 20:40	U	10
Tetrachloroethylene	127-18-4	<0.00347	0.0500	0.00347	mg/L	09.05.17 20:40	U	10
Toluene	108-88-3	0.0256	0.0500	0.00500	mg/L	09.05.17 20:40	J	10
1,2,3-Trichlorobenzene	87-61-6	<0.0200	0.0500	0.0200	mg/L	09.05.17 20:40	U	10
1,2,4-Trichlorobenzene	120-82-1	<0.0200	0.0500	0.0200	mg/L	09.05.17 20:40	U	10
1,1,1-Trichloroethane	71-55-6	<0.00130	0.0500	0.00130	mg/L	09.05.17 20:40	U	10
1,1,2-Trichloroethane	79-00-5	<0.00272	0.0500	0.00272	mg/L	09.05.17 20:40	U	10
Trichloroethene	79-01-6	<0.00218	0.0500	0.00218	mg/L	09.05.17 20:40	U	10
Trichlorofluoromethane	75-69-4	<0.00191	0.0500	0.00191	mg/L	09.05.17 20:40	U	10
1,2,3-Trichloropropane	96-18-4	<0.00214	0.0500	0.00214	mg/L	09.05.17 20:40	U	10
1,2,4-Trimethylbenzene	95-63-6	0.233	0.0500	0.00113	mg/L	09.05.17 20:40		10
1,3,5-Trimethylbenzene	108-67-8	0.0627	0.0500	0.00178	mg/L	09.05.17 20:40		10
o-Xylene	95-47-6	0.0586	0.0500	0.00500	mg/L	09.05.17 20:40		10
m,p-Xylenes	179601-23-1	0.513	0.100	0.0100	mg/L	09.05.17 20:40		10
Vinyl Chloride	75-01-4	<0.00232	0.0200	0.00232	mg/L	09.05.17 20:40	U	10
Total Xylenes	1330-20-7	0.572		0.00500	mg/L	09.05.17 20:40		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Dibromofluoromethane	99	75 - 131	%		
1,2-Dichloroethane-D4	105	63 - 144	%		
Toluene-D8	98	80 - 117	%		
4-Bromofluorobenzene	99	74 - 124	%		



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-2**

Matrix: Ground Water

Sample Depth:

Lab Sample Id: 561295-012

Date Collected: 08.24.17 15.00

Date Received: 08.25.17 15.10

Analytical Method: TPH by Texas1005

Prep Method: 1005

Analyst: ARL

% Moist:

Tech: ARL

Seq Number: 3026360

Date Prep: 08.25.17 16.03

Prep seq: 729947

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Range Hydrocarbons	PHC612	64.3	9.67	0.309	mg/L	08.31.17 14:54	X	2
C12-C28 Range Hydrocarbons	PHCG1228	<0.318	9.67	0.318	mg/L	08.31.17 14:54	U	2
C28-C35 Range Hydrocarbons	PHCG2835	1.70	9.67	0.196	mg/L	08.31.17 14:54	J	2
Total TPH	PHC635	66.0		0.196	mg/L	08.31.17 14:54		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
o-Terphenyl	88	70 - 130	%		
1-Chlorooctane	93	70 - 130	%		

Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-2**

Lab Sample Id: 561295-012

Analytical Method: VOAs by SW-846 8260

Analyst: SAD

Seq Number: 3026557

Matrix: Ground Water

Date Collected: 08.24.17 15:00

Sample Depth:

Date Received: 08.25.17 15:10

Prep Method: 5030B

Tech: SAD

Date Prep: 09.02.17 17:30

Prep seq: 730301

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.140	0.0500	0.00185	mg/L	09.03.17 18:44	XF	10
Bromobenzene	108-86-1	<0.00258	0.0500	0.00258	mg/L	09.03.17 18:44	U	10
Bromochloromethane	74-97-5	<0.00328	0.0500	0.00328	mg/L	09.03.17 18:44	U	10
Bromodichloromethane	75-27-4	<0.00164	0.0500	0.00164	mg/L	09.03.17 18:44	U	10
Bromoform	75-25-2	<0.00348	0.0500	0.00348	mg/L	09.03.17 18:44	U	10
Bromomethane	74-83-9	<0.00127	0.0500	0.00127	mg/L	09.03.17 18:44	U	10
n-Butylbenzene	104-51-8	0.0486	0.0500	0.0200	mg/L	09.03.17 18:44	JX	10
Sec-Butylbenzene	135-98-8	0.0307	0.0500	0.00124	mg/L	09.03.17 18:44	JX	10
tert-Butylbenzene	98-06-6	<0.00177	0.0500	0.00177	mg/L	09.03.17 18:44	U	10
Carbon Tetrachloride	56-23-5	<0.00243	0.0500	0.00243	mg/L	09.03.17 18:44	U	10
Chlorobenzene	108-90-7	<0.00110	0.0500	0.00110	mg/L	09.03.17 18:44	U	10
Chloroethane	75-00-3	<0.00190	0.100	0.00190	mg/L	09.03.17 18:44	U	10
Chloroform	67-66-3	<0.00107	0.0500	0.00107	mg/L	09.03.17 18:44	U	10
Chloromethane	74-87-3	<0.0500	0.100	0.0500	mg/L	09.03.17 18:44	U	10
2-Chlorotoluene	95-49-8	<0.00293	0.0500	0.00293	mg/L	09.03.17 18:44	U	10
4-Chlorotoluene	106-43-4	<0.00114	0.0500	0.00114	mg/L	09.03.17 18:44	U	10
p-Cymene (p-Isopropyltoluene)	99-87-6	0.0148	0.0500	0.00150	mg/L	09.03.17 18:44	JX	10
Dibromochloromethane	124-48-1	<0.00212	0.0500	0.00212	mg/L	09.03.17 18:44	U	10
1,2-Dibromo-3-Chloropropane	96-12-8	<0.00707	0.0500	0.00707	mg/L	09.03.17 18:44	U	10
1,2-Dibromoethane	106-93-4	<0.00380	0.0500	0.00380	mg/L	09.03.17 18:44	U	10
Dibromomethane	74-95-3	<0.00186	0.0500	0.00186	mg/L	09.03.17 18:44	U	10
1,2-Dichlorobenzene	95-50-1	<0.00175	0.0500	0.00175	mg/L	09.03.17 18:44	U	10
1,3-Dichlorobenzene	541-73-1	<0.00169	0.0500	0.00169	mg/L	09.03.17 18:44	U	10
1,4-Dichlorobenzene	106-46-7	<0.00222	0.0500	0.00222	mg/L	09.03.17 18:44	U	10
Dichlorodifluoromethane	75-71-8	<0.00148	0.0500	0.00148	mg/L	09.03.17 18:44	U	10
1,1-Dichloroethane	75-34-3	<0.00182	0.0500	0.00182	mg/L	09.03.17 18:44	U	10
1,2-Dichloroethane	107-06-2	<0.00283	0.0500	0.00283	mg/L	09.03.17 18:44	U	10
1,1-Dichloroethene	75-35-4	<0.00178	0.0500	0.00178	mg/L	09.03.17 18:44	U	10
cis-1,2-Dichloroethene	156-59-2	<0.00162	0.0500	0.00162	mg/L	09.03.17 18:44	U	10
trans-1,2-dichloroethene	156-60-5	<0.00167	0.0500	0.00167	mg/L	09.03.17 18:44	U	10
1,2-Dichloropropane	78-87-5	<0.00170	0.0500	0.00170	mg/L	09.03.17 18:44	U	10
1,3-Dichloropropane	142-28-9	<0.00199	0.0500	0.00199	mg/L	09.03.17 18:44	U	10
2,2-Dichloropropane	594-20-7	<0.00154	0.0500	0.00154	mg/L	09.03.17 18:44	U	10
1,1-Dichloropropene	563-58-6	<0.00257	0.0500	0.00257	mg/L	09.03.17 18:44	U	10
cis-1,3-Dichloropropene	10061-01-5	<0.00126	0.0500	0.00126	mg/L	09.03.17 18:44	U	10
trans-1,3-dichloropropene	10061-02-6	<0.00198	0.0500	0.00198	mg/L	09.03.17 18:44	U	10
Ethylbenzene	100-41-4	1.44	0.0500	0.00190	mg/L	09.03.17 18:44	XF	10
Hexachlorobutadiene	87-68-3	<0.0200	0.0500	0.0200	mg/L	09.03.17 18:44	U	10
isopropylbenzene	98-82-8	0.111	0.0500	0.00218	mg/L	09.03.17 18:44	XF	10
Methylene Chloride	75-09-2	<0.0200	0.0500	0.0200	mg/L	09.03.17 18:44	UXF	10
MTBE	1634-04-4	0.390	0.0500	0.00500	mg/L	09.03.17 18:44	XF	10
Naphthalene	91-20-3	0.728	0.100	0.0200	mg/L	09.03.17 18:44	XF	10
n-Propylbenzene	103-65-1	0.447	0.0500	0.00173	mg/L	09.03.17 18:44	XF	10



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-2**

Lab Sample Id: 561295-012

Analytical Method: VOAs by SW-846 8260

Analyst: SAD

Seq Number: 3026557

Matrix: Ground Water

Date Collected: 08.24.17 15:00

Sample Depth:

Date Received: 08.25.17 15:10

Prep Method: 5030B

Tech: SAD

Date Prep: 09.02.17 17:30

Prep seq: 730301

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Styrene	100-42-5	<0.00197	0.0500	0.00197	mg/L	09.03.17 18:44	UX	10
1,1,1,2-Tetrachloroethane	630-20-6	<0.00195	0.0500	0.00195	mg/L	09.03.17 18:44	U	10
1,1,2,2-Tetrachloroethane	79-34-5	<0.00365	0.0500	0.00365	mg/L	09.03.17 18:44	U	10
Tetrachloroethylene	127-18-4	<0.00347	0.0500	0.00347	mg/L	09.03.17 18:44	U	10
Toluene	108-88-3	0.155	0.0500	0.00500	mg/L	09.03.17 18:44	XF	10
1,2,3-Trichlorobenzene	87-61-6	<0.0200	0.0500	0.0200	mg/L	09.03.17 18:44	UXF	10
1,2,4-Trichlorobenzene	120-82-1	<0.0200	0.0500	0.0200	mg/L	09.03.17 18:44	U	10
1,1,1-Trichloroethane	71-55-6	<0.00130	0.0500	0.00130	mg/L	09.03.17 18:44	U	10
1,1,2-Trichloroethane	79-00-5	<0.00272	0.0500	0.00272	mg/L	09.03.17 18:44	U	10
Trichloroethene	79-01-6	<0.00218	0.0500	0.00218	mg/L	09.03.17 18:44	U	10
Trichlorofluoromethane	75-69-4	<0.00191	0.0500	0.00191	mg/L	09.03.17 18:44	U	10
1,2,3-Trichloropropane	96-18-4	<0.00214	0.0500	0.00214	mg/L	09.03.17 18:44	U	10
1,2,4-Trimethylbenzene	95-63-6	2.71	0.250	0.00565	mg/L	09.03.17 18:44	DXF	50
1,3,5-Trimethylbenzene	108-67-8	0.870	0.0500	0.00178	mg/L	09.03.17 18:44	XF	10
o-Xylene	95-47-6	1.32	0.0500	0.00500	mg/L	09.03.17 18:44	XF	10
m,p-Xylenes	179601-23-1	6.08	0.500	0.0500	mg/L	09.03.17 18:44	DXF	50
Vinyl Chloride	75-01-4	<0.00232	0.0200	0.00232	mg/L	09.03.17 18:44	U	10
Total Xylenes	1330-20-7	7.40		0.00500	mg/L	09.03.17 18:44		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Dibromofluoromethane	97	75 - 131	%		
1,2-Dichloroethane-D4	99	63 - 144	%		
Toluene-D8	98	80 - 117	%		
4-Bromofluorobenzene	97	74 - 124	%		



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-3**

Matrix: Ground Water

Sample Depth:

Lab Sample Id: 561295-013

Date Collected: 08.24.17 17:30

Date Received: 08.25.17 15:10

Analytical Method: TPH by Texas1005

Prep Method: 1005

Analyst: ARL

% Moist:

Tech: ARL

Seq Number: 3026360

Date Prep: 08.25.17 16:06

Prep seq: 729947

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Range Hydrocarbons	PHC612	14.5	4.46	0.142	mg/L	08.31.17 15:15		1
C12-C28 Range Hydrocarbons	PHCG1228	1.40	4.46	0.147	mg/L	08.31.17 15:15	J	1
C28-C35 Range Hydrocarbons	PHCG2835	<0.0903	4.46	0.0903	mg/L	08.31.17 15:15	U	1
Total TPH	PHC635	15.9		0.0903	mg/L	08.31.17 15:15		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
o-Terphenyl	84	70 - 130	%		
1-Chlorooctane	82	70 - 130	%		

Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-3**

Lab Sample Id: 561295-013

Matrix: Ground Water

Sample Depth:

Date Received: 08.25.17 15.10

Analytical Method: VOAs by SW-846 8260

Prep Method: 5030B

Analyst: MCH

Tech: MCH

Seq Number: 3026802

Date Prep: 09.05.17 16.50

Prep seq: 730433

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.0114	0.0500	0.00185	mg/L	09.05.17 17:16	J	10
Bromobenzene	108-86-1	<0.00258	0.0500	0.00258	mg/L	09.05.17 17:16	U	10
Bromochloromethane	74-97-5	<0.00328	0.0500	0.00328	mg/L	09.05.17 17:16	U	10
Bromodichloromethane	75-27-4	<0.00164	0.0500	0.00164	mg/L	09.05.17 17:16	U	10
Bromoform	75-25-2	<0.00348	0.0500	0.00348	mg/L	09.05.17 17:16	U	10
Bromomethane	74-83-9	<0.00127	0.0500	0.00127	mg/L	09.05.17 17:16	U	10
n-Butylbenzene	104-51-8	0.0763	0.0500	0.0200	mg/L	09.05.17 17:16		10
Sec-Butylbenzene	135-98-8	0.0154	0.0500	0.00124	mg/L	09.05.17 17:16	J	10
tert-Butylbenzene	98-06-6	<0.00177	0.0500	0.00177	mg/L	09.05.17 17:16	U	10
Carbon Tetrachloride	56-23-5	<0.00243	0.0500	0.00243	mg/L	09.05.17 17:16	U	10
Chlorobenzene	108-90-7	<0.00110	0.0500	0.00110	mg/L	09.05.17 17:16	U	10
Chloroethane	75-00-3	<0.00190	0.100	0.00190	mg/L	09.05.17 17:16	U	10
Chloroform	67-66-3	<0.00107	0.0500	0.00107	mg/L	09.05.17 17:16	U	10
Chloromethane	74-87-3	<0.0500	0.100	0.0500	mg/L	09.05.17 17:16	U	10
2-Chlorotoluene	95-49-8	<0.00293	0.0500	0.00293	mg/L	09.05.17 17:16	U	10
4-Chlorotoluene	106-43-4	<0.00114	0.0500	0.00114	mg/L	09.05.17 17:16	U	10
p-Cymene (p-Isopropyltoluene)	99-87-6	0.00710	0.0500	0.00150	mg/L	09.05.17 17:16	J	10
Dibromochloromethane	124-48-1	<0.00212	0.0500	0.00212	mg/L	09.05.17 17:16	U	10
1,2-Dibromo-3-Chloropropane	96-12-8	<0.00707	0.0500	0.00707	mg/L	09.05.17 17:16	U	10
1,2-Dibromoethane	106-93-4	<0.00380	0.0500	0.00380	mg/L	09.05.17 17:16	U	10
Dibromomethane	74-95-3	<0.00186	0.0500	0.00186	mg/L	09.05.17 17:16	U	10
1,2-Dichlorobenzene	95-50-1	<0.00175	0.0500	0.00175	mg/L	09.05.17 17:16	U	10
1,3-Dichlorobenzene	541-73-1	<0.00169	0.0500	0.00169	mg/L	09.05.17 17:16	U	10
1,4-Dichlorobenzene	106-46-7	<0.00222	0.0500	0.00222	mg/L	09.05.17 17:16	U	10
Dichlorodifluoromethane	75-71-8	<0.00148	0.0500	0.00148	mg/L	09.05.17 17:16	U	10
1,1-Dichloroethane	75-34-3	<0.00182	0.0500	0.00182	mg/L	09.05.17 17:16	U	10
1,2-Dichloroethane	107-06-2	<0.00283	0.0500	0.00283	mg/L	09.05.17 17:16	U	10
1,1-Dichloroethene	75-35-4	<0.00178	0.0500	0.00178	mg/L	09.05.17 17:16	U	10
cis-1,2-Dichloroethene	156-59-2	<0.00162	0.0500	0.00162	mg/L	09.05.17 17:16	U	10
trans-1,2-dichloroethene	156-60-5	<0.00167	0.0500	0.00167	mg/L	09.05.17 17:16	U	10
1,2-Dichloropropane	78-87-5	<0.00170	0.0500	0.00170	mg/L	09.05.17 17:16	U	10
1,3-Dichloropropane	142-28-9	<0.00199	0.0500	0.00199	mg/L	09.05.17 17:16	U	10
2,2-Dichloropropane	594-20-7	<0.00154	0.0500	0.00154	mg/L	09.05.17 17:16	U	10
1,1-Dichloropropene	563-58-6	<0.00257	0.0500	0.00257	mg/L	09.05.17 17:16	U	10
cis-1,3-Dichloropropene	10061-01-5	<0.00126	0.0500	0.00126	mg/L	09.05.17 17:16	U	10
trans-1,3-dichloropropene	10061-02-6	<0.00198	0.0500	0.00198	mg/L	09.05.17 17:16	U	10
Ethylbenzene	100-41-4	0.168	0.0500	0.00190	mg/L	09.05.17 17:16		10
Hexachlorobutadiene	87-68-3	<0.0200	0.0500	0.0200	mg/L	09.05.17 17:16	U	10
isopropylbenzene	98-82-8	0.0285	0.0500	0.00218	mg/L	09.05.17 17:16	J	10
Methylene Chloride	75-09-2	<0.0200	0.0500	0.0200	mg/L	09.05.17 17:16	U	10
MTBE	1634-04-4	0.0267	0.0500	0.00500	mg/L	09.05.17 17:16	J	10
Naphthalene	91-20-3	0.358	0.100	0.0200	mg/L	09.05.17 17:16		10
n-Propylbenzene	103-65-1	0.125	0.0500	0.00173	mg/L	09.05.17 17:16		10



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-3**

Lab Sample Id: 561295-013

Analytical Method: VOAs by SW-846 8260

Analyst: MCH

Seq Number: 3026802

Matrix: Ground Water

Date Collected: 08.24.17 17:30

Sample Depth:

Date Received: 08.25.17 15:10

Prep Method: 5030B

Tech: MCH

Date Prep: 09.05.17 16:50

Prep seq: 730433

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Styrene	100-42-5	<0.00197	0.0500	0.00197	mg/L	09.05.17 17:16	U	10
1,1,1,2-Tetrachloroethane	630-20-6	<0.00195	0.0500	0.00195	mg/L	09.05.17 17:16	U	10
1,1,2,2-Tetrachloroethane	79-34-5	<0.00365	0.0500	0.00365	mg/L	09.05.17 17:16	U	10
Tetrachloroethylene	127-18-4	<0.00347	0.0500	0.00347	mg/L	09.05.17 17:16	U	10
Toluene	108-88-3	0.0107	0.0500	0.00500	mg/L	09.05.17 17:16	J	10
1,2,3-Trichlorobenzene	87-61-6	<0.0200	0.0500	0.0200	mg/L	09.05.17 17:16	U	10
1,2,4-Trichlorobenzene	120-82-1	<0.0200	0.0500	0.0200	mg/L	09.05.17 17:16	U	10
1,1,1-Trichloroethane	71-55-6	<0.00130	0.0500	0.00130	mg/L	09.05.17 17:16	U	10
1,1,2-Trichloroethane	79-00-5	<0.00272	0.0500	0.00272	mg/L	09.05.17 17:16	U	10
Trichloroethene	79-01-6	<0.00218	0.0500	0.00218	mg/L	09.05.17 17:16	U	10
Trichlorofluoromethane	75-69-4	<0.00191	0.0500	0.00191	mg/L	09.05.17 17:16	U	10
1,2,3-Trichloropropane	96-18-4	<0.00214	0.0500	0.00214	mg/L	09.05.17 17:16	U	10
1,2,4-Trimethylbenzene	95-63-6	0.747	0.0500	0.00113	mg/L	09.05.17 17:16		10
1,3,5-Trimethylbenzene	108-67-8	0.245	0.0500	0.00178	mg/L	09.05.17 17:16		10
o-Xylene	95-47-6	0.152	0.0500	0.00500	mg/L	09.05.17 17:16		10
m,p-Xylenes	179601-23-1	0.753	0.100	0.0100	mg/L	09.05.17 17:16		10
Vinyl Chloride	75-01-4	<0.00232	0.0200	0.00232	mg/L	09.05.17 17:16	U	10
Total Xylenes	1330-20-7	0.905		0.00500	mg/L	09.05.17 17:16		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Dibromofluoromethane	97	75 - 131	%		
1,2-Dichloroethane-D4	101	63 - 144	%		
Toluene-D8	98	80 - 117	%		
4-Bromofluorobenzene	100	74 - 124	%		



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-4**

Matrix: Ground Water

Sample Depth:

Lab Sample Id: 561295-014

Date Collected: 08.24.17 16.00

Date Received: 08.25.17 15.10

Analytical Method: TPH by Texas1005

Prep Method: 1005

Analyst: ARL

% Moist:

Tech: ARL

Seq Number: 3026360

Date Prep: 08.25.17 16.09

Prep seq: 729947

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Range Hydrocarbons	PHC612	5.79	9.55	0.305	mg/L	08.31.17 02:12	J	2
C12-C28 Range Hydrocarbons	PHCG1228	<0.314	9.55	0.314	mg/L	08.31.17 02:12	U	2
C28-C35 Range Hydrocarbons	PHCG2835	<0.193	9.55	0.193	mg/L	08.31.17 02:12	U	2
Total TPH	PHC635	5.79		0.193	mg/L	08.31.17 02:12	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
o-Terphenyl	115	70 - 130	%		
1-Chlorooctane	107	70 - 130	%		

Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-4**

Lab Sample Id: 561295-014

Matrix: Ground Water

Sample Depth:

Date Received: 08.25.17 15:10

Analytical Method: VOAs by SW-846 8260

Prep Method: 5030B

Analyst: MCH

Tech: MCH

Seq Number: 3026802

Date Prep: 09.05.17 13:01

Prep seq: 730433

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.0395	0.0100	0.000370	mg/L	09.05.17 15:20		2
Bromobenzene	108-86-1	<0.000516	0.0100	0.000516	mg/L	09.05.17 15:20	U	2
Bromochloromethane	74-97-5	<0.000656	0.0100	0.000656	mg/L	09.05.17 15:20	U	2
Bromodichloromethane	75-27-4	<0.000328	0.0100	0.000328	mg/L	09.05.17 15:20	U	2
Bromoform	75-25-2	<0.000696	0.0100	0.000696	mg/L	09.05.17 15:20	U	2
Bromomethane	74-83-9	<0.000254	0.0100	0.000254	mg/L	09.05.17 15:20	U	2
n-Butylbenzene	104-51-8	<0.00400	0.0100	0.00400	mg/L	09.05.17 15:20	U	2
Sec-Butylbenzene	135-98-8	0.00718	0.0100	0.000249	mg/L	09.05.17 15:20	J	2
tert-Butylbenzene	98-06-6	<0.000353	0.0100	0.000353	mg/L	09.05.17 15:20	U	2
Carbon Tetrachloride	56-23-5	<0.000485	0.0100	0.000485	mg/L	09.05.17 15:20	U	2
Chlorobenzene	108-90-7	<0.000220	0.0100	0.000220	mg/L	09.05.17 15:20	U	2
Chloroethane	75-00-3	<0.000381	0.0200	0.000381	mg/L	09.05.17 15:20	U	2
Chloroform	67-66-3	<0.000214	0.0100	0.000214	mg/L	09.05.17 15:20	U	2
Chloromethane	74-87-3	<0.0100	0.0200	0.0100	mg/L	09.05.17 15:20	U	2
2-Chlorotoluene	95-49-8	<0.000586	0.0100	0.000586	mg/L	09.05.17 15:20	U	2
4-Chlorotoluene	106-43-4	<0.000229	0.0100	0.000229	mg/L	09.05.17 15:20	U	2
p-Cymene (p-Isopropyltoluene)	99-87-6	0.00348	0.0100	0.000300	mg/L	09.05.17 15:20	J	2
Dibromochloromethane	124-48-1	<0.000425	0.0100	0.000425	mg/L	09.05.17 15:20	U	2
1,2-Dibromo-3-Chloropropane	96-12-8	<0.00141	0.0100	0.00141	mg/L	09.05.17 15:20	U	2
1,2-Dibromoethane	106-93-4	<0.000760	0.0100	0.000760	mg/L	09.05.17 15:20	U	2
Dibromomethane	74-95-3	<0.000372	0.0100	0.000372	mg/L	09.05.17 15:20	U	2
1,2-Dichlorobenzene	95-50-1	<0.000350	0.0100	0.000350	mg/L	09.05.17 15:20	U	2
1,3-Dichlorobenzene	541-73-1	<0.000337	0.0100	0.000337	mg/L	09.05.17 15:20	U	2
1,4-Dichlorobenzene	106-46-7	<0.000444	0.0100	0.000444	mg/L	09.05.17 15:20	U	2
Dichlorodifluoromethane	75-71-8	<0.000296	0.0100	0.000296	mg/L	09.05.17 15:20	U	2
1,1-Dichloroethane	75-34-3	<0.000364	0.0100	0.000364	mg/L	09.05.17 15:20	U	2
1,2-Dichloroethane	107-06-2	<0.000566	0.0100	0.000566	mg/L	09.05.17 15:20	U	2
1,1-Dichloroethene	75-35-4	<0.000355	0.0100	0.000355	mg/L	09.05.17 15:20	U	2
cis-1,2-Dichloroethene	156-59-2	<0.000324	0.0100	0.000324	mg/L	09.05.17 15:20	U	2
trans-1,2-dichloroethene	156-60-5	<0.000334	0.0100	0.000334	mg/L	09.05.17 15:20	U	2
1,2-Dichloropropane	78-87-5	<0.000339	0.0100	0.000339	mg/L	09.05.17 15:20	U	2
1,3-Dichloropropane	142-28-9	<0.000397	0.0100	0.000397	mg/L	09.05.17 15:20	U	2
2,2-Dichloropropane	594-20-7	<0.000307	0.0100	0.000307	mg/L	09.05.17 15:20	U	2
1,1-Dichloropropene	563-58-6	<0.000514	0.0100	0.000514	mg/L	09.05.17 15:20	U	2
cis-1,3-Dichloropropene	10061-01-5	<0.000251	0.0100	0.000251	mg/L	09.05.17 15:20	U	2
trans-1,3-dichloropropene	10061-02-6	<0.000396	0.0100	0.000396	mg/L	09.05.17 15:20	U	2
Ethylbenzene	100-41-4	0.115	0.0100	0.000380	mg/L	09.05.17 15:20		2
Hexachlorobutadiene	87-68-3	<0.00400	0.0100	0.00400	mg/L	09.05.17 15:20	U	2
isopropylbenzene	98-82-8	0.0169	0.0100	0.000435	mg/L	09.05.17 15:20		2
Methylene Chloride	75-09-2	<0.00400	0.0100	0.00400	mg/L	09.05.17 15:20		2
MTBE	1634-04-4	0.0762	0.0100	0.00100	mg/L	09.05.17 15:20		2
Naphthalene	91-20-3	0.0717	0.0200	0.00400	mg/L	09.05.17 15:20		2
n-Propylbenzene	103-65-1	0.0748	0.0100	0.000345	mg/L	09.05.17 15:20		2



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-4**

Lab Sample Id: 561295-014

Analytical Method: VOAs by SW-846 8260

Analyst: MCH

Seq Number: 3026802

Matrix: Ground Water

Date Collected: 08.24.17 16:00

Sample Depth:

Date Received: 08.25.17 15:10

Prep Method: 5030B

Tech: MCH

Date Prep: 09.05.17 13:01

Prep seq: 730433

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Styrene	100-42-5	<0.000395	0.0100	0.000395	mg/L	09.05.17 15:20	U	2
1,1,1,2-Tetrachloroethane	630-20-6	<0.000391	0.0100	0.000391	mg/L	09.05.17 15:20	U	2
1,1,2,2-Tetrachloroethane	79-34-5	<0.000730	0.0100	0.000730	mg/L	09.05.17 15:20	U	2
Tetrachloroethylene	127-18-4	<0.000694	0.0100	0.000694	mg/L	09.05.17 15:20	U	2
Toluene	108-88-3	0.00874	0.0100	0.00100	mg/L	09.05.17 15:20	J	2
1,2,3-Trichlorobenzene	87-61-6	<0.00400	0.0100	0.00400	mg/L	09.05.17 15:20	U	2
1,2,4-Trichlorobenzene	120-82-1	<0.00400	0.0100	0.00400	mg/L	09.05.17 15:20	U	2
1,1,1-Trichloroethane	71-55-6	<0.000260	0.0100	0.000260	mg/L	09.05.17 15:20	U	2
1,1,2-Trichloroethane	79-00-5	<0.000544	0.0100	0.000544	mg/L	09.05.17 15:20	U	2
Trichloroethene	79-01-6	<0.000437	0.0100	0.000437	mg/L	09.05.17 15:20	U	2
Trichlorofluoromethane	75-69-4	<0.000381	0.0100	0.000381	mg/L	09.05.17 15:20	U	2
1,2,3-Trichloropropane	96-18-4	<0.000428	0.0100	0.000428	mg/L	09.05.17 15:20	U	2
1,2,4-Trimethylbenzene	95-63-6	0.435	0.0500	0.00113	mg/L	09.05.17 16:05	D	10
1,3,5-Trimethylbenzene	108-67-8	0.150	0.0100	0.000355	mg/L	09.05.17 15:20		2
o-Xylene	95-47-6	0.110	0.0100	0.00100	mg/L	09.05.17 15:20		2
m,p-Xylenes	179601-23-1	0.516	0.0200	0.00200	mg/L	09.05.17 15:20		2
Vinyl Chloride	75-01-4	<0.000464	0.00400	0.000464	mg/L	09.05.17 15:20	U	2
Total Xylenes	1330-20-7	0.626		0.00100	mg/L	09.05.17 15:20		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Dibromofluoromethane	100	75 - 131	%		
1,2-Dichloroethane-D4	103	63 - 144	%		
Toluene-D8	97	80 - 117	%		
4-Bromofluorobenzene	98	74 - 124	%		



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-5**

Lab Sample Id: 561295-015

Analytical Method: TPH by Texas1005

Analyst: ARL

Seq Number: 3026360

Matrix: Ground Water

Date Collected: 08.24.17 17:00

Sample Depth:

Date Received: 08.25.17 15:10

Prep Method: 1005

Tech: ARL

Date Prep: 08.25.17 16:12

Prep seq: 729947

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Range Hydrocarbons	PHC612	54.0	6.92	0.221	mg/L	08.31.17 17:21		1
C12-C28 Range Hydrocarbons	PHCG1228	12.2	6.92	0.227	mg/L	08.31.17 17:21		1
C28-C35 Range Hydrocarbons	PHCG2835	<0.140	6.92	0.140	mg/L	08.31.17 17:21	U	1
Total TPH	PHC635	66.2		0.140	mg/L	08.31.17 17:21		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
o-Terphenyl	104	70 - 130	%		
1-Chlorooctane	111	70 - 130	%		

Analytical Method: PAHs by 8270C SIM

Analyst: MNL

Seq Number: 3026966

Subcontractor: SUB: TX104704295

Prep Method: SW3511

Tech: MNL

% Moist:

Date Prep: 09.07.17 10:00

Prep seq: 730534

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Acenaphthene	83-32-9	<0.000300	0.000500	0.000300	mg/L	09.07.17 14:04	UK	1
Acenaphthylene	208-96-8	<0.000300	0.000500	0.000300	mg/L	09.07.17 14:04	UK	1
Anthracene	120-12-7	<0.000300	0.000500	0.000300	mg/L	09.07.17 14:04	UK	1
Benzo(a)anthracene	56-55-3	<0.000300	0.000500	0.000300	mg/L	09.07.17 14:04	UK	1
Benzo(a)pyrene	50-32-8	<0.000300	0.000500	0.000300	mg/L	09.07.17 14:04	UK	1
Benzo(b)fluoranthene	205-99-2	<0.000300	0.000500	0.000300	mg/L	09.07.17 14:04	UK	1
Benzo(g,h,i)perylene	191-24-2	<0.000300	0.000500	0.000300	mg/L	09.07.17 14:04	UK	1
Benzo(k)fluoranthene	207-08-9	<0.000300	0.000500	0.000300	mg/L	09.07.17 14:04	UK	1
Chrysene	218-01-9	<0.000300	0.000500	0.000300	mg/L	09.07.17 14:04	UK	1
Dibenz(a,h)anthracene	53-70-3	<0.000300	0.000500	0.000300	mg/L	09.07.17 14:04	UK	1
Dibenzofuran	132-64-9	<0.000300	0.000500	0.000300	mg/L	09.07.17 14:04	UK	1
Fluoranthene	206-44-0	<0.000300	0.000500	0.000300	mg/L	09.07.17 14:04	UK	1
Fluorene	86-73-7	<0.000300	0.000500	0.000300	mg/L	09.07.17 14:04	UK	1
Indeno(1,2,3-c,d)Pyrene	193-39-5	<0.000300	0.000500	0.000300	mg/L	09.07.17 14:04	UK	1
Naphthalene	91-20-3	0.0557	0.00100	0.000300	mg/L	09.07.17 14:04	K	1
Phenanthrene	85-01-8	<0.000300	0.000500	0.000300	mg/L	09.07.17 14:04	UK	1
Pyrene	129-00-0	<0.000300	0.000500	0.000300	mg/L	09.07.17 14:04	UK	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Nitrobenzene-d5	39	41 - 128	%		**
2-Fluorobiphenyl	35	55 - 135	%		**
Terphenyl-D14	44	54 - 131	%		**

Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-5**

Lab Sample Id: 561295-015

Analytical Method: VOAs by SW-846 8260

Analyst: MCH

Seq Number: 3026802

Matrix: Ground Water

Date Collected: 08.24.17 17:00

Sample Depth:

Date Received: 08.25.17 15:10

Prep Method: 5030B

Tech: MCH

Date Prep: 09.05.17 15:41

Prep seq: 730433

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	1.16	0.100	0.00370	mg/L	09.05.17 16:28		20
Bromobenzene	108-86-1	<0.00516	0.100	0.00516	mg/L	09.05.17 16:28	U	20
Bromochloromethane	74-97-5	<0.00656	0.100	0.00656	mg/L	09.05.17 16:28	U	20
Bromodichloromethane	75-27-4	<0.00328	0.100	0.00328	mg/L	09.05.17 16:28	U	20
Bromoform	75-25-2	<0.00696	0.100	0.00696	mg/L	09.05.17 16:28	U	20
Bromomethane	74-83-9	<0.00254	0.100	0.00254	mg/L	09.05.17 16:28	U	20
n-Butylbenzene	104-51-8	0.0660	0.100	0.0400	mg/L	09.05.17 16:28	J	20
Sec-Butylbenzene	135-98-8	0.0228	0.100	0.00249	mg/L	09.05.17 16:28	J	20
tert-Butylbenzene	98-06-6	<0.00353	0.100	0.00353	mg/L	09.05.17 16:28	U	20
Carbon Tetrachloride	56-23-5	<0.00485	0.100	0.00485	mg/L	09.05.17 16:28	U	20
Chlorobenzene	108-90-7	<0.00220	0.100	0.00220	mg/L	09.05.17 16:28	U	20
Chloroethane	75-00-3	<0.00381	0.200	0.00381	mg/L	09.05.17 16:28	U	20
Chloroform	67-66-3	<0.00214	0.100	0.00214	mg/L	09.05.17 16:28	U	20
Chloromethane	74-87-3	<0.100	0.200	0.100	mg/L	09.05.17 16:28	U	20
2-Chlorotoluene	95-49-8	<0.00586	0.100	0.00586	mg/L	09.05.17 16:28	U	20
4-Chlorotoluene	106-43-4	<0.00229	0.100	0.00229	mg/L	09.05.17 16:28	U	20
p-Cymene (p-Isopropyltoluene)	99-87-6	0.00580	0.100	0.00300	mg/L	09.05.17 16:28	J	20
Dibromochloromethane	124-48-1	<0.00425	0.100	0.00425	mg/L	09.05.17 16:28	U	20
1,2-Dibromo-3-Chloropropane	96-12-8	<0.0141	0.100	0.0141	mg/L	09.05.17 16:28	U	20
1,2-Dibromoethane	106-93-4	<0.00760	0.100	0.00760	mg/L	09.05.17 16:28	U	20
Dibromomethane	74-95-3	<0.00372	0.100	0.00372	mg/L	09.05.17 16:28	U	20
1,2-Dichlorobenzene	95-50-1	<0.00350	0.100	0.00350	mg/L	09.05.17 16:28	U	20
1,3-Dichlorobenzene	541-73-1	<0.00337	0.100	0.00337	mg/L	09.05.17 16:28	U	20
1,4-Dichlorobenzene	106-46-7	<0.00444	0.100	0.00444	mg/L	09.05.17 16:28	U	20
Dichlorodifluoromethane	75-71-8	<0.00296	0.100	0.00296	mg/L	09.05.17 16:28	U	20
1,1-Dichloroethane	75-34-3	<0.00364	0.100	0.00364	mg/L	09.05.17 16:28	U	20
1,2-Dichloroethane	107-06-2	<0.00566	0.100	0.00566	mg/L	09.05.17 16:28	U	20
1,1-Dichloroethene	75-35-4	<0.00355	0.100	0.00355	mg/L	09.05.17 16:28	U	20
cis-1,2-Dichloroethene	156-59-2	<0.00324	0.100	0.00324	mg/L	09.05.17 16:28	U	20
trans-1,2-dichloroethene	156-60-5	<0.00334	0.100	0.00334	mg/L	09.05.17 16:28	U	20
1,2-Dichloropropane	78-87-5	<0.00339	0.100	0.00339	mg/L	09.05.17 16:28	U	20
1,3-Dichloropropane	142-28-9	<0.00397	0.100	0.00397	mg/L	09.05.17 16:28	U	20
2,2-Dichloropropane	594-20-7	<0.00307	0.100	0.00307	mg/L	09.05.17 16:28	U	20
1,1-Dichloropropene	563-58-6	<0.00514	0.100	0.00514	mg/L	09.05.17 16:28	U	20
cis-1,3-Dichloropropene	10061-01-5	<0.00251	0.100	0.00251	mg/L	09.05.17 16:28	U	20
trans-1,3-dichloropropene	10061-02-6	<0.00396	0.100	0.00396	mg/L	09.05.17 16:28	U	20
Ethylbenzene	100-41-4	1.93	0.100	0.00380	mg/L	09.05.17 16:28		20
Hexachlorobutadiene	87-68-3	<0.0400	0.100	0.0400	mg/L	09.05.17 16:28	U	20
isopropylbenzene	98-82-8	0.125	0.100	0.00435	mg/L	09.05.17 16:28		20
Methylene Chloride	75-09-2	<0.0400	0.100	0.0400	mg/L	09.05.17 16:28		20
MTBE	1634-04-4	0.241	0.100	0.0100	mg/L	09.05.17 16:28		20
Naphthalene	91-20-3	0.959	0.200	0.0400	mg/L	09.05.17 16:28		20
n-Propylbenzene	103-65-1	0.455	0.100	0.00345	mg/L	09.05.17 16:28		20



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **TSP-5**

Lab Sample Id: 561295-015

Analytical Method: VOAs by SW-846 8260

Analyst: MCH

Seq Number: 3026802

Matrix: Ground Water

Date Collected: 08.24.17 17:00

Sample Depth:

Date Received: 08.25.17 15:10

Prep Method: 5030B

Tech: MCH

Date Prep: 09.05.17 15:41

Prep seq: 730433

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Styrene	100-42-5	<0.00395	0.100	0.00395	mg/L	09.05.17 16:28	U	20
1,1,1,2-Tetrachloroethane	630-20-6	<0.00391	0.100	0.00391	mg/L	09.05.17 16:28	U	20
1,1,2,2-Tetrachloroethane	79-34-5	<0.00730	0.100	0.00730	mg/L	09.05.17 16:28	U	20
Tetrachloroethylene	127-18-4	<0.00694	0.100	0.00694	mg/L	09.05.17 16:28	U	20
Toluene	108-88-3	0.0306	0.100	0.0100	mg/L	09.05.17 16:28	J	20
1,2,3-Trichlorobenzene	87-61-6	<0.0400	0.100	0.0400	mg/L	09.05.17 16:28	U	20
1,2,4-Trichlorobenzene	120-82-1	<0.0400	0.100	0.0400	mg/L	09.05.17 16:28	U	20
1,1,1-Trichloroethane	71-55-6	<0.00260	0.100	0.00260	mg/L	09.05.17 16:28	U	20
1,1,2-Trichloroethane	79-00-5	<0.00544	0.100	0.00544	mg/L	09.05.17 16:28	U	20
Trichloroethene	79-01-6	<0.00437	0.100	0.00437	mg/L	09.05.17 16:28	U	20
Trichlorofluoromethane	75-69-4	<0.00381	0.100	0.00381	mg/L	09.05.17 16:28	U	20
1,2,3-Trichloropropane	96-18-4	<0.00428	0.100	0.00428	mg/L	09.05.17 16:28	U	20
1,2,4-Trimethylbenzene	95-63-6	0.672	0.100	0.00226	mg/L	09.05.17 16:28		20
1,3,5-Trimethylbenzene	108-67-8	0.121	0.100	0.00355	mg/L	09.05.17 16:28		20
o-Xylene	95-47-6	0.0244	0.100	0.0100	mg/L	09.05.17 16:28	J	20
m,p-Xylenes	179601-23-1	0.941	0.200	0.0200	mg/L	09.05.17 16:28		20
Vinyl Chloride	75-01-4	<0.00464	0.0400	0.00464	mg/L	09.05.17 16:28	U	20
Total Xylenes	1330-20-7	0.965		0.0100	mg/L	09.05.17 16:28		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Dibromofluoromethane	98	75 - 131	%		
1,2-Dichloroethane-D4	104	63 - 144	%		
Toluene-D8	99	80 - 117	%		
4-Bromofluorobenzene	99	74 - 124	%		



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **Duplicate**

Matrix: **Soil**

Sample Depth:

Lab Sample Id: 561295-016

Date Collected: 08.24.17 00:00

Date Received: 08.25.17 15:10

Analytical Method: TPH by Texas1005

Prep Method: 1005

Analyst: ARL

% Moist: 15.3

Tech: ARL

Seq Number: 3026305

Date Prep: 08.30.17 17:09

Prep seq: 730099

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Range Hydrocarbons	PHC612	61.3	54.3	2.57	mg/kg	08.31.17 13:31		1
C12-C28 Range Hydrocarbons	PHCG1228	21.3	54.3	1.76	mg/kg	08.31.17 13:31	J	1
C28-C35 Range Hydrocarbons	PHCG2835	<0.736	54.3	0.736	mg/kg	08.31.17 13:31	U	1
Total TPH	PHC635	82.6		0.736	mg/kg	08.31.17 13:31		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
o-Terphenyl	92	70 - 130	%		
1-Chlorooctane	88	70 - 130	%		

Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id:	Duplicate	Matrix:	Soil	Sample Depth:	
Lab Sample Id:	561295-016	Date Collected:	08.24.17 00:00	Date Received:	08.25.17 15:10
Analytical Method:	VOAs by SW-846 8260			Prep Method:	5035
Analyst:	MCH	% Moist:	15.3	Tech:	MCH
Seq Number:	3026581	Date Prep:	09.03.17 17:45		
		Prep seq:	730314		

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.00330	0.105	0.00330	mg/kg	09.03.17 21:19	U	18
Bromobenzene	108-86-1	<0.00922	0.105	0.00922	mg/kg	09.03.17 21:19	U	18
Bromochloromethane	74-97-5	<0.0100	0.105	0.0100	mg/kg	09.03.17 21:19	U	18
Bromodichloromethane	75-27-4	<0.00559	0.105	0.00559	mg/kg	09.03.17 21:19	U	18
Bromoform	75-25-2	<0.0147	0.105	0.0147	mg/kg	09.03.17 21:19	U	18
Bromomethane	74-83-9	<0.0222	0.105	0.0222	mg/kg	09.03.17 21:19	U	18
tert-Butylbenzene	98-06-6	<0.00435	0.105	0.00435	mg/kg	09.03.17 21:19	U	18
Sec-Butylbenzene	135-98-8	0.289	0.105	0.0103	mg/kg	09.03.17 21:19		18
n-Butylbenzene	104-51-8	1.29	0.105	0.0421	mg/kg	09.03.17 21:19		18
Carbon Tetrachloride	56-23-5	<0.00492	0.105	0.00492	mg/kg	09.03.17 21:19	U	18
Chlorobenzene	108-90-7	<0.00504	0.105	0.00504	mg/kg	09.03.17 21:19	U	18
Chloroethane	75-00-3	<0.0115	0.211	0.0115	mg/kg	09.03.17 21:19	U	18
Chloroform	67-66-3	<0.00616	0.105	0.00616	mg/kg	09.03.17 21:19	U	18
Chloromethane	74-87-3	<0.00629	0.211	0.00629	mg/kg	09.03.17 21:19	U	18
2-Chlorotoluene	95-49-8	<0.00826	0.105	0.00826	mg/kg	09.03.17 21:19	U	18
4-Chlorotoluene	106-43-4	<0.00925	0.105	0.00925	mg/kg	09.03.17 21:19	U	18
p-Cymene (p-Isopropyltoluene)	99-87-6	0.116	0.105	0.00885	mg/kg	09.03.17 21:19		18
1,2-Dibromo-3-Chloropropane	96-12-8	<0.0327	0.105	0.0327	mg/kg	09.03.17 21:19	U	18
Dibromochloromethane	124-48-1	<0.00995	0.105	0.00995	mg/kg	09.03.17 21:19	U	18
1,2-Dibromoethane	106-93-4	<0.00891	0.105	0.00891	mg/kg	09.03.17 21:19	U	18
Dibromomethane	74-95-3	<0.00742	0.105	0.00742	mg/kg	09.03.17 21:19	U	18
1,2-Dichlorobenzene	95-50-1	<0.00907	0.105	0.00907	mg/kg	09.03.17 21:19	U	18
1,3-Dichlorobenzene	541-73-1	<0.00782	0.105	0.00782	mg/kg	09.03.17 21:19	U	18
1,4-Dichlorobenzene	106-46-7	<0.00500	0.105	0.00500	mg/kg	09.03.17 21:19	U	18
Dichlorodifluoromethane	75-71-8	<0.00896	0.105	0.00896	mg/kg	09.03.17 21:19	U	18
1,2-Dichloroethane	107-06-2	<0.00739	0.105	0.00739	mg/kg	09.03.17 21:19	U	18
1,1-Dichloroethane	75-34-3	<0.00423	0.105	0.00423	mg/kg	09.03.17 21:19	U	18
trans-1,2-dichloroethene	156-60-5	<0.00616	0.105	0.00616	mg/kg	09.03.17 21:19	U	18
cis-1,2-Dichloroethene	156-59-2	<0.00716	0.105	0.00716	mg/kg	09.03.17 21:19	U	18
1,1-Dichloroethene	75-35-4	<0.00499	0.105	0.00499	mg/kg	09.03.17 21:19	U	18
2,2-Dichloropropane	594-20-7	<0.0249	0.105	0.0249	mg/kg	09.03.17 21:19	U	18
1,3-Dichloropropane	142-28-9	<0.00526	0.105	0.00526	mg/kg	09.03.17 21:19	U	18
1,2-Dichloropropane	78-87-5	<0.00995	0.105	0.00995	mg/kg	09.03.17 21:19	U	18
trans-1,3-dichloropropene	10061-02-6	<0.00639	0.105	0.00639	mg/kg	09.03.17 21:19	U	18
1,1-Dichloropropene	563-58-6	<0.00891	0.105	0.00891	mg/kg	09.03.17 21:19	U	18
cis-1,3-Dichloropropene	10061-01-5	<0.00900	0.105	0.00900	mg/kg	09.03.17 21:19	U	18
Ethylbenzene	100-41-4	0.0423	0.105	0.00905	mg/kg	09.03.17 21:19	J	18
Hexachlorobutadiene	87-68-3	<0.0421	0.105	0.0421	mg/kg	09.03.17 21:19	U	18
isopropylbenzene	98-82-8	0.196	0.105	0.00352	mg/kg	09.03.17 21:19		18
Methylene Chloride	75-09-2	<0.105	0.421	0.105	mg/kg	09.03.17 21:19	U	18
MTBE	1634-04-4	<0.0211	0.105	0.0211	mg/kg	09.03.17 21:19	U	18
Naphthalene	91-20-3	0.381	0.211	0.0421	mg/kg	09.03.17 21:19		18
n-Propylbenzene	103-65-1	1.03	0.105	0.00377	mg/kg	09.03.17 21:19		18



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **Duplicate**

Lab Sample Id: 561295-016

Analytical Method: VOAs by SW-846 8260

Analyst: MCH

Seq Number: 3026581

Matrix: Soil

Date Collected: 08.24.17 00:00

Sample Depth:

Date Received: 08.25.17 15:10

Prep Method: 5035

Tech: MCH

Date Prep: 09.03.17 17:45

Prep seq: 730314

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Styrene	100-42-5	<0.00316	0.105	0.00316	mg/kg	09.03.17 21:19	U	18
1,1,1,2-Tetrachloroethane	630-20-6	<0.00857	0.105	0.00857	mg/kg	09.03.17 21:19	U	18
1,1,2,2-Tetrachloroethane	79-34-5	<0.00966	0.105	0.00966	mg/kg	09.03.17 21:19	U	18
Tetrachloroethylene	127-18-4	<0.00539	0.105	0.00539	mg/kg	09.03.17 21:19	U	18
Toluene	108-88-3	<0.0211	0.105	0.0211	mg/kg	09.03.17 21:19	U	18
1,2,3-Trichlorobenzene	87-61-6	<0.0421	0.105	0.0421	mg/kg	09.03.17 21:19	U	18
1,2,4-Trichlorobenzene	120-82-1	<0.0421	0.105	0.0421	mg/kg	09.03.17 21:19	U	18
1,1,2-Trichloroethane	79-00-5	<0.00686	0.105	0.00686	mg/kg	09.03.17 21:19	U	18
1,1,1-Trichloroethane	71-55-6	<0.00713	0.105	0.00713	mg/kg	09.03.17 21:19	U	18
Trichloroethene	79-01-6	<0.00688	0.105	0.00688	mg/kg	09.03.17 21:19	U	18
Trichlorofluoromethane	75-69-4	<0.0102	0.105	0.0102	mg/kg	09.03.17 21:19	U	18
1,2,3-Trichloropropane	96-18-4	<0.0148	0.105	0.0148	mg/kg	09.03.17 21:19	U	18
1,2,4-Trimethylbenzene	95-63-6	0.423	0.105	0.00238	mg/kg	09.03.17 21:19		18
1,3,5-Trimethylbenzene	108-67-8	0.0406	0.105	0.00837	mg/kg	09.03.17 21:19	J	18
Vinyl Chloride	75-01-4	<0.0174	0.0421	0.0174	mg/kg	09.03.17 21:19	U	18
o-Xylene	95-47-6	<0.0105	0.105	0.0105	mg/kg	09.03.17 21:19	U	18
m,p-Xylenes	179601-23-1	0.0438	0.211	0.0211	mg/kg	09.03.17 21:19	J	18
Total Xylenes	1330-20-7	0.0438		0.0105	mg/kg	09.03.17 21:19	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Dibromofluoromethane	77	53 - 142	%		
1,2-Dichloroethane-D4	100	56 - 150	%		
Toluene-D8	108	70 - 130	%		
4-Bromofluorobenzene	120	68 - 152	%		



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **Duplicate**

Matrix: **Ground Water**

Sample Depth:

Lab Sample Id: 561295-017

Date Collected: 08.24.17 00:00

Date Received: 08.25.17 15:10

Analytical Method: TPH by Texas1005

Prep Method: 1005

Analyst: **ARL**

% Moist:

Tech: **ARL**

Seq Number: 3026360

Date Prep: 08.25.17 16:15

Prep seq: 729947

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Range Hydrocarbons	PHC612	5.80	7.34	0.234	mg/L	09.01.17 11:23	J	1
C12-C28 Range Hydrocarbons	PHCG1228	<0.241	7.34	0.241	mg/L	09.01.17 11:23	U	1
C28-C35 Range Hydrocarbons	PHCG2835	<0.149	7.34	0.149	mg/L	09.01.17 11:23	U	1
Total TPH	PHC635	5.80		0.149	mg/L	09.01.17 11:23	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
o-Terphenyl	93	70 - 130	%		
1-Chlorooctane	86	70 - 130	%		

Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **Duplicate**

Lab Sample Id: 561295-017

Analytical Method: VOAs by SW-846 8260

Analyst: MCH

Seq Number: 3026802

Matrix: Ground Water

Date Collected: 08.24.17 00:00

Sample Depth:

Date Received: 08.25.17 15:10

Prep Method: 5030B

Tech: MCH

Date Prep: 09.05.17 15:42

Prep seq: 730433

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.814	0.100	0.00370	mg/L	09.05.17 16:50		20
Bromobenzene	108-86-1	<0.00516	0.100	0.00516	mg/L	09.05.17 16:50	U	20
Bromochloromethane	74-97-5	<0.00656	0.100	0.00656	mg/L	09.05.17 16:50	U	20
Bromodichloromethane	75-27-4	<0.00328	0.100	0.00328	mg/L	09.05.17 16:50	U	20
Bromoform	75-25-2	<0.00696	0.100	0.00696	mg/L	09.05.17 16:50	U	20
Bromomethane	74-83-9	<0.00254	0.100	0.00254	mg/L	09.05.17 16:50	U	20
n-Butylbenzene	104-51-8	0.0938	0.100	0.0400	mg/L	09.05.17 16:50	J	20
Sec-Butylbenzene	135-98-8	0.0264	0.100	0.00249	mg/L	09.05.17 16:50	J	20
tert-Butylbenzene	98-06-6	<0.00353	0.100	0.00353	mg/L	09.05.17 16:50	U	20
Carbon Tetrachloride	56-23-5	<0.00485	0.100	0.00485	mg/L	09.05.17 16:50	U	20
Chlorobenzene	108-90-7	<0.00220	0.100	0.00220	mg/L	09.05.17 16:50	U	20
Chloroethane	75-00-3	<0.00381	0.200	0.00381	mg/L	09.05.17 16:50	U	20
Chloroform	67-66-3	<0.00214	0.100	0.00214	mg/L	09.05.17 16:50	U	20
Chloromethane	74-87-3	<0.100	0.200	0.100	mg/L	09.05.17 16:50	U	20
2-Chlorotoluene	95-49-8	<0.00586	0.100	0.00586	mg/L	09.05.17 16:50	U	20
4-Chlorotoluene	106-43-4	<0.00229	0.100	0.00229	mg/L	09.05.17 16:50	U	20
p-Cymene (p-Isopropyltoluene)	99-87-6	0.00540	0.100	0.00300	mg/L	09.05.17 16:50	J	20
Dibromochloromethane	124-48-1	<0.00425	0.100	0.00425	mg/L	09.05.17 16:50	U	20
1,2-Dibromo-3-Chloropropane	96-12-8	<0.0141	0.100	0.0141	mg/L	09.05.17 16:50	U	20
1,2-Dibromoethane	106-93-4	<0.00760	0.100	0.00760	mg/L	09.05.17 16:50	U	20
Dibromomethane	74-95-3	<0.00372	0.100	0.00372	mg/L	09.05.17 16:50	U	20
1,2-Dichlorobenzene	95-50-1	<0.00350	0.100	0.00350	mg/L	09.05.17 16:50	U	20
1,3-Dichlorobenzene	541-73-1	<0.00337	0.100	0.00337	mg/L	09.05.17 16:50	U	20
1,4-Dichlorobenzene	106-46-7	<0.00444	0.100	0.00444	mg/L	09.05.17 16:50	U	20
Dichlorodifluoromethane	75-71-8	<0.00296	0.100	0.00296	mg/L	09.05.17 16:50	U	20
1,1-Dichloroethane	75-34-3	<0.00364	0.100	0.00364	mg/L	09.05.17 16:50	U	20
1,2-Dichloroethane	107-06-2	<0.00566	0.100	0.00566	mg/L	09.05.17 16:50	U	20
1,1-Dichloroethene	75-35-4	<0.00355	0.100	0.00355	mg/L	09.05.17 16:50	U	20
cis-1,2-Dichloroethene	156-59-2	<0.00324	0.100	0.00324	mg/L	09.05.17 16:50	U	20
trans-1,2-dichloroethene	156-60-5	<0.00334	0.100	0.00334	mg/L	09.05.17 16:50	U	20
1,2-Dichloropropane	78-87-5	<0.00339	0.100	0.00339	mg/L	09.05.17 16:50	U	20
1,3-Dichloropropane	142-28-9	<0.00397	0.100	0.00397	mg/L	09.05.17 16:50	U	20
2,2-Dichloropropane	594-20-7	<0.00307	0.100	0.00307	mg/L	09.05.17 16:50	U	20
1,1-Dichloropropene	563-58-6	<0.00514	0.100	0.00514	mg/L	09.05.17 16:50	U	20
cis-1,3-Dichloropropene	10061-01-5	<0.00251	0.100	0.00251	mg/L	09.05.17 16:50	U	20
trans-1,3-dichloropropene	10061-02-6	<0.00396	0.100	0.00396	mg/L	09.05.17 16:50	U	20
Ethylbenzene	100-41-4	1.94	0.100	0.00380	mg/L	09.05.17 16:50		20
Hexachlorobutadiene	87-68-3	<0.0400	0.100	0.0400	mg/L	09.05.17 16:50	U	20
isopropylbenzene	98-82-8	0.138	0.100	0.00435	mg/L	09.05.17 16:50		20
Methylene Chloride	75-09-2	<0.0400	0.100	0.0400	mg/L	09.05.17 16:50		20
MTBE	1634-04-4	0.194	0.100	0.0100	mg/L	09.05.17 16:50		20
Naphthalene	91-20-3	1.54	0.200	0.0400	mg/L	09.05.17 16:50		20
n-Propylbenzene	103-65-1	0.553	0.100	0.00345	mg/L	09.05.17 16:50		20



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **Duplicate**

Lab Sample Id: 561295-017

Analytical Method: VOAs by SW-846 8260

Analyst: MCH

Seq Number: 3026802

Matrix: Ground Water

Date Collected: 08.24.17 00:00

Sample Depth:

Date Received: 08.25.17 15:10

Prep Method: 5030B

Tech: MCH

Date Prep: 09.05.17 15:42

Prep seq: 730433

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Styrene	100-42-5	<0.00395	0.100	0.00395	mg/L	09.05.17 16:50	U	20
1,1,1,2-Tetrachloroethane	630-20-6	<0.00391	0.100	0.00391	mg/L	09.05.17 16:50	U	20
1,1,2,2-Tetrachloroethane	79-34-5	<0.00730	0.100	0.00730	mg/L	09.05.17 16:50	U	20
Tetrachloroethylene	127-18-4	<0.00694	0.100	0.00694	mg/L	09.05.17 16:50	U	20
Toluene	108-88-3	0.0220	0.100	0.0100	mg/L	09.05.17 16:50	J	20
1,2,3-Trichlorobenzene	87-61-6	<0.0400	0.100	0.0400	mg/L	09.05.17 16:50	U	20
1,2,4-Trichlorobenzene	120-82-1	<0.0400	0.100	0.0400	mg/L	09.05.17 16:50	U	20
1,1,1-Trichloroethane	71-55-6	<0.00260	0.100	0.00260	mg/L	09.05.17 16:50	U	20
1,1,2-Trichloroethane	79-00-5	<0.00544	0.100	0.00544	mg/L	09.05.17 16:50	U	20
Trichloroethene	79-01-6	<0.00437	0.100	0.00437	mg/L	09.05.17 16:50	U	20
Trichlorofluoromethane	75-69-4	<0.00381	0.100	0.00381	mg/L	09.05.17 16:50	U	20
1,2,3-Trichloroproppane	96-18-4	<0.00428	0.100	0.00428	mg/L	09.05.17 16:50	U	20
1,2,4-Trimethylbenzene	95-63-6	0.800	0.100	0.00226	mg/L	09.05.17 16:50		20
1,3,5-Trimethylbenzene	108-67-8	0.159	0.100	0.00355	mg/L	09.05.17 16:50		20
o-Xylene	95-47-6	0.0284	0.100	0.0100	mg/L	09.05.17 16:50	J	20
m,p-Xylenes	179601-23-1	1.18	0.200	0.0200	mg/L	09.05.17 16:50		20
Vinyl Chloride	75-01-4	<0.00464	0.0400	0.00464	mg/L	09.05.17 16:50	U	20
Total Xylenes	1330-20-7	1.21		0.0100	mg/L	09.05.17 16:50		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Dibromofluoromethane	100	75 - 131	%		
1,2-Dichloroethane-D4	101	63 - 144	%		
Toluene-D8	97	80 - 117	%		
4-Bromofluorobenzene	96	74 - 124	%		



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: Equipment Blank

Matrix: Ground Water

Sample Depth:

Lab Sample Id: 561295-018

Date Collected: 08.24.17 14.50

Date Received: 08.25.17 15.10

Analytical Method: TPH by Texas1005

Prep Method: 1005

Analyst: ARL

% Moist:

Tech: ARL

Seq Number: 3026360

Date Prep: 08.25.17 16.18

Prep seq: 729947

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Range Hydrocarbons	PHC612	<0.143	4.48	0.143	mg/L	08.31.17 03:14	U	1
C12-C28 Range Hydrocarbons	PHCG1228	<0.147	4.48	0.147	mg/L	08.31.17 03:14	U	1
C28-C35 Range Hydrocarbons	PHCG2835	<0.0907	4.48	0.0907	mg/L	08.31.17 03:14	U	1
Total TPH	PHC635	<0.0907		0.0907	mg/L	08.31.17 03:14	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
o-Terphenyl	114	70 - 130	%		
1-Chlorooctane	105	70 - 130	%		

Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **Equipment Blank**

Lab Sample Id: 561295-018

Analytical Method: VOAs by SW-846 8260

Analyst: SAD

Seq Number: 3026826

Matrix: Ground Water

Date Collected: 08.24.17 14.50

Sample Depth:

Date Received: 08.25.17 15.10

Prep Method: 5030B

Tech: SAD

Date Prep: 09.05.17 17.00

Prep seq: 730444

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000185	0.00500	0.000185	mg/L	09.05.17 17:56	U	1
Bromobenzene	108-86-1	<0.000258	0.00500	0.000258	mg/L	09.05.17 17:56	U	1
Bromoform	75-25-2	<0.000348	0.00500	0.000348	mg/L	09.05.17 17:56	U	1
Bromochloromethane	74-97-5	<0.000328	0.00500	0.000328	mg/L	09.05.17 17:56	U	1
Bromodichloromethane	75-27-4	0.00309	0.00500	0.000164	mg/L	09.05.17 17:56	J	1
Bromomethane	74-83-9	<0.000127	0.00500	0.000127	mg/L	09.05.17 17:56	U	1
n-Butylbenzene	104-51-8	<0.00200	0.00500	0.00200	mg/L	09.05.17 17:56	U	1
Sec-Butylbenzene	135-98-8	<0.000124	0.00500	0.000124	mg/L	09.05.17 17:56	U	1
tert-Butylbenzene	98-06-6	<0.000177	0.00500	0.000177	mg/L	09.05.17 17:56	U	1
Carbon Tetrachloride	56-23-5	<0.000243	0.00500	0.000243	mg/L	09.05.17 17:56	U	1
Chlorobenzene	108-90-7	<0.000110	0.00500	0.000110	mg/L	09.05.17 17:56	U	1
Chloroethane	75-00-3	<0.000190	0.0100	0.000190	mg/L	09.05.17 17:56	U	1
Chloroform	67-66-3	0.00304	0.00500	0.000107	mg/L	09.05.17 17:56	J	1
Chloromethane	74-87-3	<0.00500	0.0100	0.00500	mg/L	09.05.17 17:56	U	1
2-Chlorotoluene	95-49-8	<0.000293	0.00500	0.000293	mg/L	09.05.17 17:56	U	1
4-Chlorotoluene	106-43-4	<0.000114	0.00500	0.000114	mg/L	09.05.17 17:56	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.000150	0.00500	0.000150	mg/L	09.05.17 17:56	U	1
Dibromochloromethane	124-48-1	0.00121	0.00500	0.000212	mg/L	09.05.17 17:56	J	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.000707	0.00500	0.000707	mg/L	09.05.17 17:56	U	1
1,2-Dibromoethane	106-93-4	<0.000380	0.00500	0.000380	mg/L	09.05.17 17:56	U	1
Dibromomethane	74-95-3	<0.000186	0.00500	0.000186	mg/L	09.05.17 17:56	U	1
1,2-Dichlorobenzene	95-50-1	<0.000175	0.00500	0.000175	mg/L	09.05.17 17:56	U	1
1,3-Dichlorobenzene	541-73-1	<0.000169	0.00500	0.000169	mg/L	09.05.17 17:56	U	1
1,4-Dichlorobenzene	106-46-7	<0.000222	0.00500	0.000222	mg/L	09.05.17 17:56	U	1
Dichlorodifluoromethane	75-71-8	<0.000148	0.00500	0.000148	mg/L	09.05.17 17:56	U	1
1,1-Dichloroethane	75-34-3	<0.000182	0.00500	0.000182	mg/L	09.05.17 17:56	U	1
1,2-Dichloroethane	107-06-2	<0.000283	0.00500	0.000283	mg/L	09.05.17 17:56	U	1
1,1-Dichloroethene	75-35-4	<0.000178	0.00500	0.000178	mg/L	09.05.17 17:56	U	1
cis-1,2-Dichloroethene	156-59-2	<0.000162	0.00500	0.000162	mg/L	09.05.17 17:56	U	1
trans-1,2-dichloroethene	156-60-5	<0.000167	0.00500	0.000167	mg/L	09.05.17 17:56	U	1
1,2-Dichloropropane	78-87-5	<0.000170	0.00500	0.000170	mg/L	09.05.17 17:56	U	1
1,3-Dichloropropane	142-28-9	<0.000199	0.00500	0.000199	mg/L	09.05.17 17:56	U	1
2,2-Dichloropropane	594-20-7	<0.000154	0.00500	0.000154	mg/L	09.05.17 17:56	U	1
1,1-Dichloropropene	563-58-6	<0.000257	0.00500	0.000257	mg/L	09.05.17 17:56	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000126	0.00500	0.000126	mg/L	09.05.17 17:56	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000198	0.00500	0.000198	mg/L	09.05.17 17:56	U	1
Ethylbenzene	100-41-4	<0.000190	0.00500	0.000190	mg/L	09.05.17 17:56	U	1
Hexachlorobutadiene	87-68-3	<0.00200	0.00500	0.00200	mg/L	09.05.17 17:56	U	1
isopropylbenzene	98-82-8	<0.000218	0.00500	0.000218	mg/L	09.05.17 17:56	U	1
Methylene Chloride	75-09-2	<0.00200	0.00500	0.00200	mg/L	09.05.17 17:56	U	1
MTBE	1634-04-4	<0.000500	0.00500	0.000500	mg/L	09.05.17 17:56	U	1
Naphthalene	91-20-3	<0.00200	0.0100	0.00200	mg/L	09.05.17 17:56	U	1
n-Propylbenzene	103-65-1	<0.000173	0.00500	0.000173	mg/L	09.05.17 17:56	U	1



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: Equipment Blank

Matrix: Ground Water

Sample Depth:

Lab Sample Id: 561295-018

Date Collected: 08.24.17 14.50

Date Received: 08.25.17 15.10

Analytical Method: VOAs by SW-846 8260

Prep Method: 5030B

Analyst: SAD

% Moist:

Tech: SAD

Seq Number: 3026826

Date Prep: 09.05.17 17.00

Prep seq: 730444

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Styrene	100-42-5	<0.000197	0.00500	0.000197	mg/L	09.05.17 17:56	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000195	0.00500	0.000195	mg/L	09.05.17 17:56	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000365	0.00500	0.000365	mg/L	09.05.17 17:56	U	1
Tetrachloroethylene	127-18-4	<0.000347	0.00500	0.000347	mg/L	09.05.17 17:56	U	1
Toluene	108-88-3	<0.000500	0.00500	0.000500	mg/L	09.05.17 17:56	U	1
1,2,3-Trichlorobenzene	87-61-6	<0.00200	0.00500	0.00200	mg/L	09.05.17 17:56	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00200	0.00500	0.00200	mg/L	09.05.17 17:56	U	1
1,1,1-Trichloroethane	71-55-6	<0.000130	0.00500	0.000130	mg/L	09.05.17 17:56	U	1
1,1,2-Trichloroethane	79-00-5	<0.000272	0.00500	0.000272	mg/L	09.05.17 17:56	U	1
Trichloroethene	79-01-6	<0.000218	0.00500	0.000218	mg/L	09.05.17 17:56	U	1
Trichlorofluoromethane	75-69-4	<0.000191	0.00500	0.000191	mg/L	09.05.17 17:56	U	1
1,2,3-Trichloropropane	96-18-4	<0.000214	0.00500	0.000214	mg/L	09.05.17 17:56	U	1
1,2,4-Trimethylbenzene	95-63-6	<0.000113	0.00500	0.000113	mg/L	09.05.17 17:56	U	1
1,3,5-Trimethylbenzene	108-67-8	<0.000178	0.00500	0.000178	mg/L	09.05.17 17:56	U	1
o-Xylene	95-47-6	<0.000500	0.00500	0.000500	mg/L	09.05.17 17:56	U	1
m,p-Xylenes	179601-23-1	<0.00100	0.0100	0.00100	mg/L	09.05.17 17:56	U	1
Vinyl Chloride	75-01-4	<0.000232	0.00200	0.000232	mg/L	09.05.17 17:56	U	1
Total Xylenes	1330-20-7	<0.000500		0.000500	mg/L	09.05.17 17:56	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Dibromofluoromethane	105	75 - 131	%		
1,2-Dichloroethane-D4	99	63 - 144	%		
Toluene-D8	97	80 - 117	%		
4-Bromofluorobenzene	99	74 - 124	%		



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **Trip Blank**

Lab Sample Id: 561295-019

Analytical Method: VOAs by SW-846 8260

Analyst: SAD

Seq Number: 3026826

Matrix: Water

Date Collected: 08.24.17 00:00

Sample Depth:

Date Received: 08.25.17 15:10

Prep Method: 5030B

Tech: SAD

Date Prep: 09.05.17 17:00

Prep seq: 730444

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000185	0.00500	0.000185	mg/L	09.05.17 18:19	U	1
Bromobenzene	108-86-1	<0.000258	0.00500	0.000258	mg/L	09.05.17 18:19	U	1
Bromochloromethane	74-97-5	<0.000328	0.00500	0.000328	mg/L	09.05.17 18:19	U	1
Bromodichloromethane	75-27-4	<0.000164	0.00500	0.000164	mg/L	09.05.17 18:19	U	1
Bromoform	75-25-2	<0.000348	0.00500	0.000348	mg/L	09.05.17 18:19	U	1
Bromomethane	74-83-9	<0.000127	0.00500	0.000127	mg/L	09.05.17 18:19	U	1
n-Butylbenzene	104-51-8	<0.00200	0.00500	0.00200	mg/L	09.05.17 18:19	U	1
Sec-Butylbenzene	135-98-8	<0.000124	0.00500	0.000124	mg/L	09.05.17 18:19	U	1
tert-Butylbenzene	98-06-6	<0.000177	0.00500	0.000177	mg/L	09.05.17 18:19	U	1
Carbon Tetrachloride	56-23-5	<0.000243	0.00500	0.000243	mg/L	09.05.17 18:19	U	1
Chlorobenzene	108-90-7	<0.000110	0.00500	0.000110	mg/L	09.05.17 18:19	U	1
Chloroethane	75-00-3	<0.000190	0.0100	0.000190	mg/L	09.05.17 18:19	U	1
Chloroform	67-66-3	<0.000107	0.00500	0.000107	mg/L	09.05.17 18:19	U	1
Chloromethane	74-87-3	<0.00500	0.0100	0.00500	mg/L	09.05.17 18:19	U	1
2-Chlorotoluene	95-49-8	<0.000293	0.00500	0.000293	mg/L	09.05.17 18:19	U	1
4-Chlorotoluene	106-43-4	<0.000114	0.00500	0.000114	mg/L	09.05.17 18:19	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.000150	0.00500	0.000150	mg/L	09.05.17 18:19	U	1
Dibromochloromethane	124-48-1	<0.000212	0.00500	0.000212	mg/L	09.05.17 18:19	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.000707	0.00500	0.000707	mg/L	09.05.17 18:19	U	1
1,2-Dibromoethane	106-93-4	<0.000380	0.00500	0.000380	mg/L	09.05.17 18:19	U	1
Dibromomethane	74-95-3	<0.000186	0.00500	0.000186	mg/L	09.05.17 18:19	U	1
1,2-Dichlorobenzene	95-50-1	<0.000175	0.00500	0.000175	mg/L	09.05.17 18:19	U	1
1,3-Dichlorobenzene	541-73-1	<0.000169	0.00500	0.000169	mg/L	09.05.17 18:19	U	1
1,4-Dichlorobenzene	106-46-7	<0.000222	0.00500	0.000222	mg/L	09.05.17 18:19	U	1
Dichlorodifluoromethane	75-71-8	<0.000148	0.00500	0.000148	mg/L	09.05.17 18:19	U	1
1,1-Dichloroethane	75-34-3	<0.000182	0.00500	0.000182	mg/L	09.05.17 18:19	U	1
1,2-Dichloroethane	107-06-2	<0.000283	0.00500	0.000283	mg/L	09.05.17 18:19	U	1
1,1-Dichloroethene	75-35-4	<0.000178	0.00500	0.000178	mg/L	09.05.17 18:19	U	1
cis-1,2-Dichloroethene	156-59-2	<0.000162	0.00500	0.000162	mg/L	09.05.17 18:19	U	1
trans-1,2-dichloroethene	156-60-5	<0.000167	0.00500	0.000167	mg/L	09.05.17 18:19	U	1
1,2-Dichloropropane	78-87-5	<0.000170	0.00500	0.000170	mg/L	09.05.17 18:19	U	1
1,3-Dichloropropane	142-28-9	<0.000199	0.00500	0.000199	mg/L	09.05.17 18:19	U	1
2,2-Dichloropropane	594-20-7	<0.000154	0.00500	0.000154	mg/L	09.05.17 18:19	U	1
1,1-Dichloropropene	563-58-6	<0.000257	0.00500	0.000257	mg/L	09.05.17 18:19	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000126	0.00500	0.000126	mg/L	09.05.17 18:19	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000198	0.00500	0.000198	mg/L	09.05.17 18:19	U	1
Ethylbenzene	100-41-4	<0.000190	0.00500	0.000190	mg/L	09.05.17 18:19	U	1
Hexachlorobutadiene	87-68-3	<0.00200	0.00500	0.00200	mg/L	09.05.17 18:19	U	1
isopropylbenzene	98-82-8	<0.000218	0.00500	0.000218	mg/L	09.05.17 18:19	U	1
Methylene Chloride	75-09-2	<0.00200	0.00500	0.00200	mg/L	09.05.17 18:19	U	1
MTBE	1634-04-4	<0.000500	0.00500	0.000500	mg/L	09.05.17 18:19	U	1
Naphthalene	91-20-3	<0.00200	0.0100	0.00200	mg/L	09.05.17 18:19	U	1
n-Propylbenzene	103-65-1	<0.000173	0.00500	0.000173	mg/L	09.05.17 18:19	U	1



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **Trip Blank**

Lab Sample Id: 561295-019

Analytical Method: VOAs by SW-846 8260

Analyst: SAD

Seq Number: 3026826

Matrix: Water

Date Collected: 08.24.17 00:00

Sample Depth:

Date Received: 08.25.17 15:10

Prep Method: 5030B

Tech: SAD

Date Prep: 09.05.17 17:00

Prep seq: 730444

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Styrene	100-42-5	<0.000197	0.00500	0.000197	mg/L	09.05.17 18:19	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000195	0.00500	0.000195	mg/L	09.05.17 18:19	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000365	0.00500	0.000365	mg/L	09.05.17 18:19	U	1
Tetrachloroethylene	127-18-4	<0.000347	0.00500	0.000347	mg/L	09.05.17 18:19	U	1
Toluene	108-88-3	<0.000500	0.00500	0.000500	mg/L	09.05.17 18:19	U	1
1,2,3-Trichlorobenzene	87-61-6	<0.00200	0.00500	0.00200	mg/L	09.05.17 18:19	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00200	0.00500	0.00200	mg/L	09.05.17 18:19	U	1
1,1,1-Trichloroethane	71-55-6	<0.000130	0.00500	0.000130	mg/L	09.05.17 18:19	U	1
1,1,2-Trichloroethane	79-00-5	<0.000272	0.00500	0.000272	mg/L	09.05.17 18:19	U	1
Trichloroethene	79-01-6	<0.000218	0.00500	0.000218	mg/L	09.05.17 18:19	U	1
Trichlorofluoromethane	75-69-4	<0.000191	0.00500	0.000191	mg/L	09.05.17 18:19	U	1
1,2,3-Trichloropropane	96-18-4	<0.000214	0.00500	0.000214	mg/L	09.05.17 18:19	U	1
1,2,4-Trimethylbenzene	95-63-6	<0.000113	0.00500	0.000113	mg/L	09.05.17 18:19	U	1
1,3,5-Trimethylbenzene	108-67-8	<0.000178	0.00500	0.000178	mg/L	09.05.17 18:19	U	1
o-Xylene	95-47-6	<0.000500	0.00500	0.000500	mg/L	09.05.17 18:19	U	1
m,p-Xylenes	179601-23-1	<0.00100	0.0100	0.00100	mg/L	09.05.17 18:19	U	1
Vinyl Chloride	75-01-4	<0.000232	0.00200	0.000232	mg/L	09.05.17 18:19	U	1
Total Xylenes	1330-20-7	<0.000500		0.000500	mg/L	09.05.17 18:19	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Dibromofluoromethane	104	75 - 131	%		
1,2-Dichloroethane-D4	100	63 - 144	%		
Toluene-D8	99	80 - 117	%		
4-Bromofluorobenzene	98	74 - 124	%		



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **729947-1-BLK**

Matrix: Water

Sample Depth:

Lab Sample Id: 729947-1-BLK

Date Collected:

Date Received:

Analytical Method: TPH by Texas1005

Prep Method: 1005

Analyst: ARL

% Moist:

Tech: ARL

Seq Number: 3026360

Date Prep: 08.25.17 11.06

Prep seq: 729947

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Range Hydrocarbons	PHC612	<0.160	5.00	0.160	mg/L	08.30.17 16:38	U	1
C12-C28 Range Hydrocarbons	PHCG1228	<0.164	5.00	0.164	mg/L	08.30.17 16:38	U	1
C28-C35 Range Hydrocarbons	PHCG2835	<0.101	5.00	0.101	mg/L	08.30.17 16:38	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
o-Terphenyl	88	70 - 130	%		
1-Chlorooctane	86	70 - 130	%		

Sample Id: **730099-1-BLK**

Matrix: Solid

Sample Depth:

Lab Sample Id: 730099-1-BLK

Date Collected:

Date Received:

Analytical Method: TPH by Texas1005

Prep Method: 1005

Analyst: ARL

% Moist:

Tech: ARL

Seq Number: 3026305

Date Prep: 08.30.17 16.24

Prep seq: 730099

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Range Hydrocarbons	PHC612	<2.36	50.0	2.36	mg/kg	08.30.17 18:57	U	1
C12-C28 Range Hydrocarbons	PHCG1228	<1.62	50.0	1.62	mg/kg	08.30.17 18:57	U	1
C28-C35 Range Hydrocarbons	PHCG2835	<0.678	50.0	0.678	mg/kg	08.30.17 18:57	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
o-Terphenyl	99	70 - 130	%		
1-Chlorooctane	90	70 - 130	%		

Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **730301-1-BLK**

Lab Sample Id: 730301-1-BLK

Analytical Method: VOAs by SW-846 8260

Analyst: SAD

Seq Number: 3026557

Matrix: Water

Date Collected:

Sample Depth:

Date Received:

Prep Method: 5030B

Tech: SAD

Date Prep: 09.02.17 16:00

Prep seq: 730301

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000185	0.00500	0.000185	mg/L	09.03.17 18:44	U	1
Bromobenzene	108-86-1	<0.000258	0.00500	0.000258	mg/L	09.03.17 18:44	U	1
Bromochloromethane	74-97-5	<0.000328	0.00500	0.000328	mg/L	09.03.17 18:44	U	1
Bromodichloromethane	75-27-4	<0.000164	0.00500	0.000164	mg/L	09.03.17 18:44	U	1
Bromoform	75-25-2	<0.000348	0.00500	0.000348	mg/L	09.03.17 18:44	U	1
Bromomethane	74-83-9	<0.000127	0.00500	0.000127	mg/L	09.03.17 18:44	U	1
n-Butylbenzene	104-51-8	<0.00200	0.00500	0.00200	mg/L	09.03.17 18:44	U	1
Sec-Butylbenzene	135-98-8	0.000180	0.00500	0.000124	mg/L	09.03.17 18:44	J	1
tert-Butylbenzene	98-06-6	<0.000177	0.00500	0.000177	mg/L	09.03.17 18:44	U	1
Carbon Tetrachloride	56-23-5	<0.000243	0.00500	0.000243	mg/L	09.03.17 18:44	U	1
Chlorobenzene	108-90-7	<0.000110	0.00500	0.000110	mg/L	09.03.17 18:44	U	1
Chloroethane	75-00-3	<0.000190	0.0100	0.000190	mg/L	09.03.17 18:44	U	1
Chloroform	67-66-3	<0.000107	0.00500	0.000107	mg/L	09.03.17 18:44	U	1
Chloromethane	74-87-3	<0.00500	0.0100	0.00500	mg/L	09.03.17 18:44	U	1
2-Chlorotoluene	95-49-8	<0.000293	0.00500	0.000293	mg/L	09.03.17 18:44	U	1
4-Chlorotoluene	106-43-4	<0.000114	0.00500	0.000114	mg/L	09.03.17 18:44	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.000150	0.00500	0.000150	mg/L	09.03.17 18:44	U	1
Dibromochloromethane	124-48-1	<0.000212	0.00500	0.000212	mg/L	09.03.17 18:44	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.000707	0.00500	0.000707	mg/L	09.03.17 18:44	U	1
1,2-Dibromoethane	106-93-4	<0.000380	0.00500	0.000380	mg/L	09.03.17 18:44	U	1
Dibromomethane	74-95-3	<0.000186	0.00500	0.000186	mg/L	09.03.17 18:44	U	1
1,2-Dichlorobenzene	95-50-1	<0.000175	0.00500	0.000175	mg/L	09.03.17 18:44	U	1
1,3-Dichlorobenzene	541-73-1	<0.000169	0.00500	0.000169	mg/L	09.03.17 18:44	U	1
1,4-Dichlorobenzene	106-46-7	<0.000222	0.00500	0.000222	mg/L	09.03.17 18:44	U	1
Dichlorodifluoromethane	75-71-8	<0.000148	0.00500	0.000148	mg/L	09.03.17 18:44	U	1
1,1-Dichloroethane	75-34-3	<0.000182	0.00500	0.000182	mg/L	09.03.17 18:44	U	1
1,2-Dichloroethane	107-06-2	<0.000283	0.00500	0.000283	mg/L	09.03.17 18:44	U	1
1,1-Dichloroethene	75-35-4	<0.000178	0.00500	0.000178	mg/L	09.03.17 18:44	U	1
cis-1,2-Dichloroethene	156-59-2	<0.000162	0.00500	0.000162	mg/L	09.03.17 18:44	U	1
trans-1,2-dichloroethene	156-60-5	<0.000167	0.00500	0.000167	mg/L	09.03.17 18:44	U	1
1,2-Dichloropropane	78-87-5	<0.000170	0.00500	0.000170	mg/L	09.03.17 18:44	U	1
1,3-Dichloropropane	142-28-9	<0.000199	0.00500	0.000199	mg/L	09.03.17 18:44	U	1
2,2-Dichloropropane	594-20-7	<0.000154	0.00500	0.000154	mg/L	09.03.17 18:44	U	1
1,1-Dichloropropene	563-58-6	<0.000257	0.00500	0.000257	mg/L	09.03.17 18:44	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000126	0.00500	0.000126	mg/L	09.03.17 18:44	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000198	0.00500	0.000198	mg/L	09.03.17 18:44	U	1
Ethylbenzene	100-41-4	0.000300	0.00500	0.000190	mg/L	09.03.17 18:44	J	1
Hexachlorobutadiene	87-68-3	<0.00200	0.00500	0.00200	mg/L	09.03.17 18:44	U	1
isopropylbenzene	98-82-8	<0.000218	0.00500	0.000218	mg/L	09.03.17 18:44	U	1
Methylene Chloride	75-09-2	<0.00200	0.00500	0.00200	mg/L	09.03.17 18:44	U	1
MTBE	1634-04-4	<0.000500	0.00500	0.000500	mg/L	09.03.17 18:44	U	1
Naphthalene	91-20-3	<0.00200	0.0100	0.00200	mg/L	09.03.17 18:44	U	1
n-Propylbenzene	103-65-1	0.000210	0.00500	0.000173	mg/L	09.03.17 18:44	J	1



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **730301-1-BLK**

Matrix: Water

Sample Depth:

Lab Sample Id: 730301-1-BLK

Date Collected:

Date Received:

Analytical Method: VOAs by SW-846 8260

Prep Method: 5030B

Analyst: SAD

% Moist:

Tech: SAD

Seq Number: 3026557

Date Prep: 09.02.17 16:00

Prep seq: 730301

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Styrene	100-42-5	<0.000197	0.00500	0.000197	mg/L	09.03.17 18:44	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000195	0.00500	0.000195	mg/L	09.03.17 18:44	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000365	0.00500	0.000365	mg/L	09.03.17 18:44	U	1
Tetrachloroethylene	127-18-4	<0.000347	0.00500	0.000347	mg/L	09.03.17 18:44	U	1
Toluene	108-88-3	<0.000500	0.00500	0.000500	mg/L	09.03.17 18:44	U	1
1,2,3-Trichlorobenzene	87-61-6	<0.00200	0.00500	0.00200	mg/L	09.03.17 18:44	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00200	0.00500	0.00200	mg/L	09.03.17 18:44	U	1
1,1,1-Trichloroethane	71-55-6	<0.000130	0.00500	0.000130	mg/L	09.03.17 18:44	U	1
1,1,2-Trichloroethane	79-00-5	<0.000272	0.00500	0.000272	mg/L	09.03.17 18:44	U	1
Trichloroethene	79-01-6	<0.000218	0.00500	0.000218	mg/L	09.03.17 18:44	U	1
Trichlorofluoromethane	75-69-4	<0.000191	0.00500	0.000191	mg/L	09.03.17 18:44	U	1
1,2,3-Trichloropropane	96-18-4	<0.000214	0.00500	0.000214	mg/L	09.03.17 18:44	U	1
1,2,4-Trimethylbenzene	95-63-6	0.000970	0.00500	0.000113	mg/L	09.03.17 18:44	J	1
1,3,5-Trimethylbenzene	108-67-8	0.000360	0.00500	0.000178	mg/L	09.03.17 18:44	J	1
o-Xylene	95-47-6	<0.000500	0.00500	0.000500	mg/L	09.03.17 18:44	U	1
m,p-Xylenes	179601-23-1	0.00126	0.0100	0.00100	mg/L	09.03.17 18:44	J	1
Vinyl Chloride	75-01-4	<0.000232	0.00200	0.000232	mg/L	09.03.17 18:44	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Dibromofluoromethane	100	75 - 131	%		
1,2-Dichloroethane-D4	100	63 - 144	%		
Toluene-D8	101	80 - 117	%		
4-Bromofluorobenzene	97	74 - 124	%		

Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **730314-1-BLK**

Matrix: Solid

Sample Depth:

Lab Sample Id: 730314-1-BLK

Date Collected:

Date Received:

Analytical Method: VOAs by SW-846 8260

Prep Method: 5035

Analyst: MCH

% Moist:

Tech: MCH

Seq Number: 3026581

Date Prep: 09.03.17 11:55

Prep seq: 730314

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000157	0.00500	0.000157	mg/kg	09.03.17 13:40	U	1
Bromobenzene	108-86-1	<0.000438	0.00500	0.000438	mg/kg	09.03.17 13:40	U	1
Bromochloromethane	74-97-5	<0.000475	0.00500	0.000475	mg/kg	09.03.17 13:40	U	1
Bromodichloromethane	75-27-4	<0.000265	0.00500	0.000265	mg/kg	09.03.17 13:40	U	1
Bromoform	75-25-2	<0.000698	0.00500	0.000698	mg/kg	09.03.17 13:40	U	1
Bromomethane	74-83-9	<0.00106	0.00500	0.00106	mg/kg	09.03.17 13:40	U	1
tert-Butylbenzene	98-06-6	<0.000206	0.00500	0.000206	mg/kg	09.03.17 13:40	U	1
Sec-Butylbenzene	135-98-8	<0.000490	0.00500	0.000490	mg/kg	09.03.17 13:40	U	1
n-Butylbenzene	104-51-8	<0.00200	0.00500	0.00200	mg/kg	09.03.17 13:40	U	1
Carbon Tetrachloride	56-23-5	<0.000234	0.00500	0.000234	mg/kg	09.03.17 13:40	U	1
Chlorobenzene	108-90-7	<0.000239	0.00500	0.000239	mg/kg	09.03.17 13:40	U	1
Chloroethane	75-00-3	<0.000549	0.0100	0.000549	mg/kg	09.03.17 13:40	U	1
Chloroform	67-66-3	<0.000292	0.00500	0.000292	mg/kg	09.03.17 13:40	U	1
Chloromethane	74-87-3	<0.000299	0.0100	0.000299	mg/kg	09.03.17 13:40	U	1
2-Chlorotoluene	95-49-8	<0.000392	0.00500	0.000392	mg/kg	09.03.17 13:40	U	1
4-Chlorotoluene	106-43-4	<0.000439	0.00500	0.000439	mg/kg	09.03.17 13:40	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.000420	0.00500	0.000420	mg/kg	09.03.17 13:40	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.00155	0.00500	0.00155	mg/kg	09.03.17 13:40	U	1
Dibromochloromethane	124-48-1	<0.000473	0.00500	0.000473	mg/kg	09.03.17 13:40	U	1
1,2-Dibromoethane	106-93-4	<0.000423	0.00500	0.000423	mg/kg	09.03.17 13:40	U	1
Dibromomethane	74-95-3	<0.000352	0.00500	0.000352	mg/kg	09.03.17 13:40	U	1
1,2-Dichlorobenzene	95-50-1	<0.000431	0.00500	0.000431	mg/kg	09.03.17 13:40	U	1
1,3-Dichlorobenzene	541-73-1	<0.000371	0.00500	0.000371	mg/kg	09.03.17 13:40	U	1
1,4-Dichlorobenzene	106-46-7	<0.000238	0.00500	0.000238	mg/kg	09.03.17 13:40	U	1
Dichlorodifluoromethane	75-71-8	<0.000426	0.00500	0.000426	mg/kg	09.03.17 13:40	U	1
1,2-Dichloroethane	107-06-2	<0.000351	0.00500	0.000351	mg/kg	09.03.17 13:40	U	1
1,1-Dichloroethane	75-34-3	<0.000201	0.00500	0.000201	mg/kg	09.03.17 13:40	U	1
trans-1,2-dichloroethene	156-60-5	<0.000292	0.00500	0.000292	mg/kg	09.03.17 13:40	U	1
cis-1,2-Dichloroethene	156-59-2	<0.000340	0.00500	0.000340	mg/kg	09.03.17 13:40	U	1
1,1-Dichloroethene	75-35-4	<0.000237	0.00500	0.000237	mg/kg	09.03.17 13:40	U	1
2,2-Dichloropropane	594-20-7	<0.00118	0.00500	0.00118	mg/kg	09.03.17 13:40	U	1
1,3-Dichloropropane	142-28-9	<0.000250	0.00500	0.000250	mg/kg	09.03.17 13:40	U	1
1,2-Dichloropropane	78-87-5	<0.000472	0.00500	0.000472	mg/kg	09.03.17 13:40	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000303	0.00500	0.000303	mg/kg	09.03.17 13:40	U	1
1,1-Dichloropropene	563-58-6	<0.000423	0.00500	0.000423	mg/kg	09.03.17 13:40	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000428	0.00500	0.000428	mg/kg	09.03.17 13:40	U	1
Ethylbenzene	100-41-4	<0.000430	0.00500	0.000430	mg/kg	09.03.17 13:40	U	1
Hexachlorobutadiene	87-68-3	<0.00200	0.00500	0.00200	mg/kg	09.03.17 13:40	U	1
isopropylbenzene	98-82-8	<0.000167	0.00500	0.000167	mg/kg	09.03.17 13:40	U	1
Methylene Chloride	75-09-2	<0.00500	0.0200	0.00500	mg/kg	09.03.17 13:40	U	1
MTBE	1634-04-4	<0.00100	0.00500	0.00100	mg/kg	09.03.17 13:40	U	1
Naphthalene	91-20-3	<0.00200	0.0100	0.00200	mg/kg	09.03.17 13:40	U	1
n-Propylbenzene	103-65-1	<0.000179	0.00500	0.000179	mg/kg	09.03.17 13:40	U	1



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **730314-1-BLK**

Matrix: Solid

Sample Depth:

Lab Sample Id: 730314-1-BLK

Date Collected:

Date Received:

Analytical Method: VOAs by SW-846 8260

Prep Method: 5035

Analyst: MCH

% Moist:

Tech: MCH

Seq Number: 3026581

Date Prep: 09.03.17 11:55

Prep seq: 730314

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Styrene	100-42-5	<0.000150	0.00500	0.000150	mg/kg	09.03.17 13:40	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000407	0.00500	0.000407	mg/kg	09.03.17 13:40	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000459	0.00500	0.000459	mg/kg	09.03.17 13:40	U	1
Tetrachloroethylene	127-18-4	<0.000256	0.00500	0.000256	mg/kg	09.03.17 13:40	U	1
Toluene	108-88-3	<0.00100	0.00500	0.00100	mg/kg	09.03.17 13:40	U	1
1,2,3-Trichlorobenzene	87-61-6	<0.00200	0.00500	0.00200	mg/kg	09.03.17 13:40	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00200	0.00500	0.00200	mg/kg	09.03.17 13:40	U	1
1,1,2-Trichloroethane	79-00-5	<0.000326	0.00500	0.000326	mg/kg	09.03.17 13:40	U	1
1,1,1-Trichloroethane	71-55-6	<0.000339	0.00500	0.000339	mg/kg	09.03.17 13:40	U	1
Trichloroethene	79-01-6	<0.000327	0.00500	0.000327	mg/kg	09.03.17 13:40	U	1
Trichlorofluoromethane	75-69-4	<0.000485	0.00500	0.000485	mg/kg	09.03.17 13:40	U	1
1,2,3-Trichloropropane	96-18-4	<0.000701	0.00500	0.000701	mg/kg	09.03.17 13:40	U	1
1,2,4-Trimethylbenzene	95-63-6	<0.000113	0.00500	0.000113	mg/kg	09.03.17 13:40	U	1
1,3,5-Trimethylbenzene	108-67-8	<0.000397	0.00500	0.000397	mg/kg	09.03.17 13:40	U	1
Vinyl Chloride	75-01-4	<0.000827	0.00200	0.000827	mg/kg	09.03.17 13:40	U	1
o-Xylene	95-47-6	<0.000500	0.00500	0.000500	mg/kg	09.03.17 13:40	U	1
m,p-Xylenes	179601-23-1	<0.00100	0.0100	0.00100	mg/kg	09.03.17 13:40	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Dibromofluoromethane	93	53 - 142	%		
1,2-Dichloroethane-D4	103	56 - 150	%		
Toluene-D8	103	70 - 130	%		
4-Bromofluorobenzene	106	68 - 152	%		



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **730324-1-BLK**

Matrix: Solid

Sample Depth:

Lab Sample Id: 730324-1-BLK

Date Collected:

Date Received:

Analytical Method: PAHs by 8270C SIM

Prep Method: 3545

Analyst: WEW

% Moist:

Tech: WEW

Seq Number: 3026783

Date Prep: 09.05.17 09:40

Prep seq: 730324

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Acenaphthene	83-32-9	<0.000833	0.00167	0.000833	mg/kg	09.06.17 09:10	U	1
Acenaphthylene	208-96-8	<0.000833	0.00167	0.000833	mg/kg	09.06.17 09:10	U	1
Anthracene	120-12-7	<0.000833	0.00167	0.000833	mg/kg	09.06.17 09:10	U	1
Benzo(a)anthracene	56-55-3	<0.000833	0.00167	0.000833	mg/kg	09.06.17 09:10	U	1
Benzo(a)pyrene	50-32-8	<0.000833	0.00167	0.000833	mg/kg	09.06.17 09:10	U	1
Benzo(b)fluoranthene	205-99-2	<0.000833	0.00167	0.000833	mg/kg	09.06.17 09:10	U	1
Benzo(g,h,i)perylene	191-24-2	<0.000833	0.00167	0.000833	mg/kg	09.06.17 09:10	U	1
Benzo(k)fluoranthene	207-08-9	<0.000833	0.00167	0.000833	mg/kg	09.06.17 09:10	U	1
Chrysene	218-01-9	<0.000833	0.00167	0.000833	mg/kg	09.06.17 09:10	U	1
Dibenz(a,h)anthracene	53-70-3	<0.000833	0.00167	0.000833	mg/kg	09.06.17 09:10	U	1
Dibenzofuran	132-64-9	<0.000833	0.00167	0.000833	mg/kg	09.06.17 09:10	U	1
Fluoranthene	206-44-0	<0.000833	0.00167	0.000833	mg/kg	09.06.17 09:10	U	1
Fluorene	86-73-7	<0.000833	0.00167	0.000833	mg/kg	09.06.17 09:10	U	1
Indeno(1,2,3-c,d)Pyrene	193-39-5	<0.000833	0.00167	0.000833	mg/kg	09.06.17 09:10	U	1
Naphthalene	91-20-3	<0.000833	0.0167	0.000833	mg/kg	09.06.17 09:10	U	1
Phenanthrene	85-01-8	<0.000833	0.00167	0.000833	mg/kg	09.06.17 09:10	U	1
Pyrene	129-00-0	<0.000833	0.00167	0.000833	mg/kg	09.06.17 09:10	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Nitrobenzene-d5	82	31 - 130	%		
2-Fluorobiphenyl	93	51 - 133	%		
Terphenyl-D14	100	46 - 137	%		



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **730356-1-BLK**

Matrix: Solid

Sample Depth:

Lab Sample Id: 730356-1-BLK

Date Collected:

Date Received:

Analytical Method: VOAs by SW-846 8260

Prep Method: 5035

Analyst: MCH

% Moist:

Tech: MCH

Seq Number: 3026678

Date Prep: 09.04.17 13:01

Prep seq: 730356

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000157	0.00500	0.000157	mg/kg	09.04.17 14:34	U	1
Bromobenzene	108-86-1	<0.000438	0.00500	0.000438	mg/kg	09.04.17 14:34	U	1
Bromochloromethane	74-97-5	<0.000475	0.00500	0.000475	mg/kg	09.04.17 14:34	U	1
Bromodichloromethane	75-27-4	<0.000265	0.00500	0.000265	mg/kg	09.04.17 14:34	U	1
Bromoform	75-25-2	<0.000698	0.00500	0.000698	mg/kg	09.04.17 14:34	U	1
Bromomethane	74-83-9	<0.00106	0.00500	0.00106	mg/kg	09.04.17 14:34	U	1
tert-Butylbenzene	98-06-6	<0.000206	0.00500	0.000206	mg/kg	09.04.17 14:34	U	1
Sec-Butylbenzene	135-98-8	<0.000490	0.00500	0.000490	mg/kg	09.04.17 14:34	U	1
n-Butylbenzene	104-51-8	<0.00200	0.00500	0.00200	mg/kg	09.04.17 14:34	U	1
Carbon Tetrachloride	56-23-5	<0.000234	0.00500	0.000234	mg/kg	09.04.17 14:34	U	1
Chlorobenzene	108-90-7	<0.000239	0.00500	0.000239	mg/kg	09.04.17 14:34	U	1
Chloroethane	75-00-3	<0.000549	0.0100	0.000549	mg/kg	09.04.17 14:34	U	1
Chloroform	67-66-3	<0.000292	0.00500	0.000292	mg/kg	09.04.17 14:34	U	1
Chloromethane	74-87-3	<0.000299	0.0100	0.000299	mg/kg	09.04.17 14:34	U	1
2-Chlorotoluene	95-49-8	<0.000392	0.00500	0.000392	mg/kg	09.04.17 14:34	U	1
4-Chlorotoluene	106-43-4	<0.000439	0.00500	0.000439	mg/kg	09.04.17 14:34	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.000420	0.00500	0.000420	mg/kg	09.04.17 14:34	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.00155	0.00500	0.00155	mg/kg	09.04.17 14:34	U	1
Dibromochloromethane	124-48-1	<0.000473	0.00500	0.000473	mg/kg	09.04.17 14:34	U	1
1,2-Dibromoethane	106-93-4	<0.000423	0.00500	0.000423	mg/kg	09.04.17 14:34	U	1
Dibromomethane	74-95-3	<0.000352	0.00500	0.000352	mg/kg	09.04.17 14:34	U	1
1,2-Dichlorobenzene	95-50-1	<0.000431	0.00500	0.000431	mg/kg	09.04.17 14:34	U	1
1,3-Dichlorobenzene	541-73-1	<0.000371	0.00500	0.000371	mg/kg	09.04.17 14:34	U	1
1,4-Dichlorobenzene	106-46-7	<0.000238	0.00500	0.000238	mg/kg	09.04.17 14:34	U	1
Dichlorodifluoromethane	75-71-8	<0.000426	0.00500	0.000426	mg/kg	09.04.17 14:34	U	1
1,2-Dichloroethane	107-06-2	<0.000351	0.00500	0.000351	mg/kg	09.04.17 14:34	U	1
1,1-Dichloroethane	75-34-3	<0.000201	0.00500	0.000201	mg/kg	09.04.17 14:34	U	1
trans-1,2-dichloroethene	156-60-5	<0.000292	0.00500	0.000292	mg/kg	09.04.17 14:34	U	1
cis-1,2-Dichloroethene	156-59-2	<0.000340	0.00500	0.000340	mg/kg	09.04.17 14:34	U	1
1,1-Dichloroethene	75-35-4	<0.000237	0.00500	0.000237	mg/kg	09.04.17 14:34	U	1
2,2-Dichloropropane	594-20-7	<0.00118	0.00500	0.00118	mg/kg	09.04.17 14:34	U	1
1,3-Dichloropropane	142-28-9	<0.000250	0.00500	0.000250	mg/kg	09.04.17 14:34	U	1
1,2-Dichloropropane	78-87-5	<0.000472	0.00500	0.000472	mg/kg	09.04.17 14:34	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000303	0.00500	0.000303	mg/kg	09.04.17 14:34	U	1
1,1-Dichloropropene	563-58-6	<0.000423	0.00500	0.000423	mg/kg	09.04.17 14:34	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000428	0.00500	0.000428	mg/kg	09.04.17 14:34	U	1
Ethylbenzene	100-41-4	<0.000430	0.00500	0.000430	mg/kg	09.04.17 14:34	U	1
Hexachlorobutadiene	87-68-3	<0.00200	0.00500	0.00200	mg/kg	09.04.17 14:34	U	1
isopropylbenzene	98-82-8	<0.000167	0.00500	0.000167	mg/kg	09.04.17 14:34	U	1
Methylene Chloride	75-09-2	<0.00500	0.0200	0.00500	mg/kg	09.04.17 14:34	U	1
MTBE	1634-04-4	<0.00100	0.00500	0.00100	mg/kg	09.04.17 14:34	U	1
Naphthalene	91-20-3	<0.00200	0.0100	0.00200	mg/kg	09.04.17 14:34	U	1
n-Propylbenzene	103-65-1	<0.000179	0.00500	0.000179	mg/kg	09.04.17 14:34	U	1



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **730356-1-BLK**

Matrix: Solid

Sample Depth:

Lab Sample Id: 730356-1-BLK

Date Collected:

Date Received:

Analytical Method: VOAs by SW-846 8260

Prep Method: 5035

Analyst: MCH

% Moist:

Tech: MCH

Seq Number: 3026678

Date Prep: 09.04.17 13:01

Prep seq: 730356

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Styrene	100-42-5	<0.000150	0.00500	0.000150	mg/kg	09.04.17 14:34	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000407	0.00500	0.000407	mg/kg	09.04.17 14:34	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000459	0.00500	0.000459	mg/kg	09.04.17 14:34	U	1
Tetrachloroethylene	127-18-4	<0.000256	0.00500	0.000256	mg/kg	09.04.17 14:34	U	1
Toluene	108-88-3	<0.00100	0.00500	0.00100	mg/kg	09.04.17 14:34	U	1
1,2,3-Trichlorobenzene	87-61-6	<0.00200	0.00500	0.00200	mg/kg	09.04.17 14:34	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00200	0.00500	0.00200	mg/kg	09.04.17 14:34	U	1
1,1,2-Trichloroethane	79-00-5	<0.000326	0.00500	0.000326	mg/kg	09.04.17 14:34	U	1
1,1,1-Trichloroethane	71-55-6	<0.000339	0.00500	0.000339	mg/kg	09.04.17 14:34	U	1
Trichloroethene	79-01-6	<0.000327	0.00500	0.000327	mg/kg	09.04.17 14:34	U	1
Trichlorofluoromethane	75-69-4	<0.000485	0.00500	0.000485	mg/kg	09.04.17 14:34	U	1
1,2,3-Trichloropropane	96-18-4	<0.000701	0.00500	0.000701	mg/kg	09.04.17 14:34	U	1
1,2,4-Trimethylbenzene	95-63-6	<0.000113	0.00500	0.000113	mg/kg	09.04.17 14:34	U	1
1,3,5-Trimethylbenzene	108-67-8	<0.000397	0.00500	0.000397	mg/kg	09.04.17 14:34	U	1
Vinyl Chloride	75-01-4	<0.000827	0.00200	0.000827	mg/kg	09.04.17 14:34	U	1
o-Xylene	95-47-6	<0.000500	0.00500	0.000500	mg/kg	09.04.17 14:34	U	1
m,p-Xylenes	179601-23-1	<0.00100	0.0100	0.00100	mg/kg	09.04.17 14:34	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Dibromofluoromethane	92	53 - 142	%		
1,2-Dichloroethane-D4	102	56 - 150	%		
Toluene-D8	104	70 - 130	%		
4-Bromofluorobenzene	108	68 - 152	%		



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **730433-1-BLK**

Matrix: Water

Sample Depth:

Lab Sample Id: 730433-1-BLK

Date Collected:

Date Received:

Analytical Method: VOAs by SW-846 8260

Prep Method: 5030B

Analyst: MCH

% Moist:

Tech: MCH

Seq Number: 3026802

Date Prep: 09.05.17 11:58

Prep seq: 730433

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000185	0.00500	0.000185	mg/L	09.05.17 13:51	U	1
Bromobenzene	108-86-1	<0.000258	0.00500	0.000258	mg/L	09.05.17 13:51	U	1
Bromochloromethane	74-97-5	<0.000328	0.00500	0.000328	mg/L	09.05.17 13:51	U	1
Bromodichloromethane	75-27-4	<0.000164	0.00500	0.000164	mg/L	09.05.17 13:51	U	1
Bromoform	75-25-2	<0.000348	0.00500	0.000348	mg/L	09.05.17 13:51	U	1
Bromomethane	74-83-9	<0.000127	0.00500	0.000127	mg/L	09.05.17 13:51	U	1
n-Butylbenzene	104-51-8	<0.00200	0.00500	0.00200	mg/L	09.05.17 13:51	U	1
Sec-Butylbenzene	135-98-8	<0.000124	0.00500	0.000124	mg/L	09.05.17 13:51	U	1
tert-Butylbenzene	98-06-6	<0.000177	0.00500	0.000177	mg/L	09.05.17 13:51	U	1
Carbon Tetrachloride	56-23-5	<0.000243	0.00500	0.000243	mg/L	09.05.17 13:51	U	1
Chlorobenzene	108-90-7	<0.000110	0.00500	0.000110	mg/L	09.05.17 13:51	U	1
Chloroethane	75-00-3	<0.000190	0.0100	0.000190	mg/L	09.05.17 13:51	U	1
Chloroform	67-66-3	<0.000107	0.00500	0.000107	mg/L	09.05.17 13:51	U	1
Chloromethane	74-87-3	<0.00500	0.0100	0.00500	mg/L	09.05.17 13:51	U	1
2-Chlorotoluene	95-49-8	<0.000293	0.00500	0.000293	mg/L	09.05.17 13:51	U	1
4-Chlorotoluene	106-43-4	<0.000114	0.00500	0.000114	mg/L	09.05.17 13:51	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.000150	0.00500	0.000150	mg/L	09.05.17 13:51	U	1
Dibromochloromethane	124-48-1	<0.000212	0.00500	0.000212	mg/L	09.05.17 13:51	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.000707	0.00500	0.000707	mg/L	09.05.17 13:51	U	1
1,2-Dibromoethane	106-93-4	<0.000380	0.00500	0.000380	mg/L	09.05.17 13:51	U	1
Dibromomethane	74-95-3	<0.000186	0.00500	0.000186	mg/L	09.05.17 13:51	U	1
1,2-Dichlorobenzene	95-50-1	<0.000175	0.00500	0.000175	mg/L	09.05.17 13:51	U	1
1,3-Dichlorobenzene	541-73-1	<0.000169	0.00500	0.000169	mg/L	09.05.17 13:51	U	1
1,4-Dichlorobenzene	106-46-7	<0.000222	0.00500	0.000222	mg/L	09.05.17 13:51	U	1
Dichlorodifluoromethane	75-71-8	<0.000148	0.00500	0.000148	mg/L	09.05.17 13:51	U	1
1,1-Dichloroethane	75-34-3	<0.000182	0.00500	0.000182	mg/L	09.05.17 13:51	U	1
1,2-Dichloroethane	107-06-2	<0.000283	0.00500	0.000283	mg/L	09.05.17 13:51	U	1
1,1-Dichloroethene	75-35-4	<0.000178	0.00500	0.000178	mg/L	09.05.17 13:51	U	1
cis-1,2-Dichloroethene	156-59-2	<0.000162	0.00500	0.000162	mg/L	09.05.17 13:51	U	1
trans-1,2-dichloroethene	156-60-5	<0.000167	0.00500	0.000167	mg/L	09.05.17 13:51	U	1
1,2-Dichloropropane	78-87-5	<0.000170	0.00500	0.000170	mg/L	09.05.17 13:51	U	1
1,3-Dichloropropane	142-28-9	<0.000199	0.00500	0.000199	mg/L	09.05.17 13:51	U	1
2,2-Dichloropropane	594-20-7	<0.000154	0.00500	0.000154	mg/L	09.05.17 13:51	U	1
1,1-Dichloropropene	563-58-6	<0.000257	0.00500	0.000257	mg/L	09.05.17 13:51	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000126	0.00500	0.000126	mg/L	09.05.17 13:51	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000198	0.00500	0.000198	mg/L	09.05.17 13:51	U	1
Ethylbenzene	100-41-4	<0.000190	0.00500	0.000190	mg/L	09.05.17 13:51	U	1
Hexachlorobutadiene	87-68-3	<0.00200	0.00500	0.00200	mg/L	09.05.17 13:51	U	1
isopropylbenzene	98-82-8	<0.000218	0.00500	0.000218	mg/L	09.05.17 13:51	U	1
Methylene Chloride	75-09-2	<0.00200	0.00500	0.00200	mg/L	09.05.17 13:51	U	1
MTBE	1634-04-4	<0.000500	0.00500	0.000500	mg/L	09.05.17 13:51	U	1
Naphthalene	91-20-3	<0.00200	0.0100	0.00200	mg/L	09.05.17 13:51	U	1
n-Propylbenzene	103-65-1	<0.000173	0.00500	0.000173	mg/L	09.05.17 13:51	U	1



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **730433-1-BLK**

Matrix: Water

Sample Depth:

Lab Sample Id: 730433-1-BLK

Date Collected:

Date Received:

Analytical Method: VOAs by SW-846 8260

Prep Method: 5030B

Analyst: MCH

% Moist:

Tech: MCH

Seq Number: 3026802

Date Prep: 09.05.17 11:58

Prep seq: 730433

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Styrene	100-42-5	<0.000197	0.00500	0.000197	mg/L	09.05.17 13:51	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000195	0.00500	0.000195	mg/L	09.05.17 13:51	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000365	0.00500	0.000365	mg/L	09.05.17 13:51	U	1
Tetrachloroethylene	127-18-4	<0.000347	0.00500	0.000347	mg/L	09.05.17 13:51	U	1
Toluene	108-88-3	<0.000500	0.00500	0.000500	mg/L	09.05.17 13:51	U	1
1,2,3-Trichlorobenzene	87-61-6	<0.00200	0.00500	0.00200	mg/L	09.05.17 13:51	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00200	0.00500	0.00200	mg/L	09.05.17 13:51	U	1
1,1,1-Trichloroethane	71-55-6	<0.000130	0.00500	0.000130	mg/L	09.05.17 13:51	U	1
1,1,2-Trichloroethane	79-00-5	<0.000272	0.00500	0.000272	mg/L	09.05.17 13:51	U	1
Trichloroethene	79-01-6	<0.000218	0.00500	0.000218	mg/L	09.05.17 13:51	U	1
Trichlorofluoromethane	75-69-4	<0.000191	0.00500	0.000191	mg/L	09.05.17 13:51	U	1
1,2,3-Trichloropropane	96-18-4	<0.000214	0.00500	0.000214	mg/L	09.05.17 13:51	U	1
1,2,4-Trimethylbenzene	95-63-6	<0.000113	0.00500	0.000113	mg/L	09.05.17 13:51	U	1
1,3,5-Trimethylbenzene	108-67-8	<0.000178	0.00500	0.000178	mg/L	09.05.17 13:51	U	1
o-Xylene	95-47-6	<0.000500	0.00500	0.000500	mg/L	09.05.17 13:51	U	1
m,p-Xylenes	179601-23-1	<0.00100	0.0100	0.00100	mg/L	09.05.17 13:51	U	1
Vinyl Chloride	75-01-4	<0.000232	0.00200	0.000232	mg/L	09.05.17 13:51	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Dibromofluoromethane	101	75 - 131	%		
1,2-Dichloroethane-D4	101	63 - 144	%		
Toluene-D8	98	80 - 117	%		
4-Bromofluorobenzene	98	74 - 124	%		



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **730444-1-BLK**

Matrix: Water

Sample Depth:

Lab Sample Id: 730444-1-BLK

Date Collected:

Date Received:

Analytical Method: VOAs by SW-846 8260

Prep Method: 5030B

Analyst: SAD

% Moist:

Tech: SAD

Seq Number: 3026826

Date Prep: 09.05.17 12.00

Prep seq: 730444

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000185	0.00500	0.000185	mg/L	09.05.17 14:20	U	1
Bromobenzene	108-86-1	<0.000258	0.00500	0.000258	mg/L	09.05.17 14:20	U	1
Bromochloromethane	74-97-5	<0.000328	0.00500	0.000328	mg/L	09.05.17 14:20	U	1
Bromodichloromethane	75-27-4	<0.000164	0.00500	0.000164	mg/L	09.05.17 14:20	U	1
Bromoform	75-25-2	<0.000348	0.00500	0.000348	mg/L	09.05.17 14:20	U	1
Bromomethane	74-83-9	<0.000127	0.00500	0.000127	mg/L	09.05.17 14:20	U	1
n-Butylbenzene	104-51-8	<0.00200	0.00500	0.00200	mg/L	09.05.17 14:20	U	1
Sec-Butylbenzene	135-98-8	<0.000124	0.00500	0.000124	mg/L	09.05.17 14:20	U	1
tert-Butylbenzene	98-06-6	<0.000177	0.00500	0.000177	mg/L	09.05.17 14:20	U	1
Carbon Tetrachloride	56-23-5	<0.000243	0.00500	0.000243	mg/L	09.05.17 14:20	U	1
Chlorobenzene	108-90-7	<0.000110	0.00500	0.000110	mg/L	09.05.17 14:20	U	1
Chloroethane	75-00-3	<0.000190	0.0100	0.000190	mg/L	09.05.17 14:20	U	1
Chloroform	67-66-3	<0.000107	0.00500	0.000107	mg/L	09.05.17 14:20	U	1
Chloromethane	74-87-3	<0.00500	0.0100	0.00500	mg/L	09.05.17 14:20	U	1
2-Chlorotoluene	95-49-8	<0.000293	0.00500	0.000293	mg/L	09.05.17 14:20	U	1
4-Chlorotoluene	106-43-4	<0.000114	0.00500	0.000114	mg/L	09.05.17 14:20	U	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.000150	0.00500	0.000150	mg/L	09.05.17 14:20	U	1
Dibromochloromethane	124-48-1	<0.000212	0.00500	0.000212	mg/L	09.05.17 14:20	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.000707	0.00500	0.000707	mg/L	09.05.17 14:20	U	1
1,2-Dibromoethane	106-93-4	<0.000380	0.00500	0.000380	mg/L	09.05.17 14:20	U	1
Dibromomethane	74-95-3	<0.000186	0.00500	0.000186	mg/L	09.05.17 14:20	U	1
1,2-Dichlorobenzene	95-50-1	<0.000175	0.00500	0.000175	mg/L	09.05.17 14:20	U	1
1,3-Dichlorobenzene	541-73-1	<0.000169	0.00500	0.000169	mg/L	09.05.17 14:20	U	1
1,4-Dichlorobenzene	106-46-7	<0.000222	0.00500	0.000222	mg/L	09.05.17 14:20	U	1
Dichlorodifluoromethane	75-71-8	<0.000148	0.00500	0.000148	mg/L	09.05.17 14:20	U	1
1,1-Dichloroethane	75-34-3	<0.000182	0.00500	0.000182	mg/L	09.05.17 14:20	U	1
1,2-Dichloroethane	107-06-2	<0.000283	0.00500	0.000283	mg/L	09.05.17 14:20	U	1
1,1-Dichloroethene	75-35-4	<0.000178	0.00500	0.000178	mg/L	09.05.17 14:20	U	1
cis-1,2-Dichloroethene	156-59-2	<0.000162	0.00500	0.000162	mg/L	09.05.17 14:20	U	1
trans-1,2-dichloroethene	156-60-5	<0.000167	0.00500	0.000167	mg/L	09.05.17 14:20	U	1
1,2-Dichloropropane	78-87-5	<0.000170	0.00500	0.000170	mg/L	09.05.17 14:20	U	1
1,3-Dichloropropane	142-28-9	<0.000199	0.00500	0.000199	mg/L	09.05.17 14:20	U	1
2,2-Dichloropropane	594-20-7	<0.000154	0.00500	0.000154	mg/L	09.05.17 14:20	U	1
1,1-Dichloropropene	563-58-6	<0.000257	0.00500	0.000257	mg/L	09.05.17 14:20	U	1
cis-1,3-Dichloropropene	10061-01-5	<0.000126	0.00500	0.000126	mg/L	09.05.17 14:20	U	1
trans-1,3-dichloropropene	10061-02-6	<0.000198	0.00500	0.000198	mg/L	09.05.17 14:20	U	1
Ethylbenzene	100-41-4	<0.000190	0.00500	0.000190	mg/L	09.05.17 14:20	U	1
Hexachlorobutadiene	87-68-3	<0.00200	0.00500	0.00200	mg/L	09.05.17 14:20	U	1
isopropylbenzene	98-82-8	<0.000218	0.00500	0.000218	mg/L	09.05.17 14:20	U	1
Methylene Chloride	75-09-2	<0.00200	0.00500	0.00200	mg/L	09.05.17 14:20	U	1
MTBE	1634-04-4	<0.000500	0.00500	0.000500	mg/L	09.05.17 14:20	U	1
Naphthalene	91-20-3	<0.00200	0.0100	0.00200	mg/L	09.05.17 14:20	U	1
n-Propylbenzene	103-65-1	<0.000173	0.00500	0.000173	mg/L	09.05.17 14:20	U	1



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **730444-1-BLK**

Matrix: Water

Sample Depth:

Lab Sample Id: 730444-1-BLK

Date Collected:

Date Received:

Analytical Method: VOAs by SW-846 8260

Prep Method: 5030B

Analyst: SAD

% Moist:

Tech: SAD

Seq Number: 3026826

Date Prep: 09.05.17 12.00

Prep seq: 730444

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Styrene	100-42-5	<0.000197	0.00500	0.000197	mg/L	09.05.17 14:20	U	1
1,1,1,2-Tetrachloroethane	630-20-6	<0.000195	0.00500	0.000195	mg/L	09.05.17 14:20	U	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.000365	0.00500	0.000365	mg/L	09.05.17 14:20	U	1
Tetrachloroethylene	127-18-4	<0.000347	0.00500	0.000347	mg/L	09.05.17 14:20	U	1
Toluene	108-88-3	<0.000500	0.00500	0.000500	mg/L	09.05.17 14:20	U	1
1,2,3-Trichlorobenzene	87-61-6	<0.00200	0.00500	0.00200	mg/L	09.05.17 14:20	U	1
1,2,4-Trichlorobenzene	120-82-1	<0.00200	0.00500	0.00200	mg/L	09.05.17 14:20	U	1
1,1,1-Trichloroethane	71-55-6	<0.000130	0.00500	0.000130	mg/L	09.05.17 14:20	U	1
1,1,2-Trichloroethane	79-00-5	<0.000272	0.00500	0.000272	mg/L	09.05.17 14:20	U	1
Trichloroethene	79-01-6	<0.000218	0.00500	0.000218	mg/L	09.05.17 14:20	U	1
Trichlorofluoromethane	75-69-4	<0.000191	0.00500	0.000191	mg/L	09.05.17 14:20	U	1
1,2,3-Trichloropropane	96-18-4	<0.000214	0.00500	0.000214	mg/L	09.05.17 14:20	U	1
1,2,4-Trimethylbenzene	95-63-6	<0.000113	0.00500	0.000113	mg/L	09.05.17 14:20	U	1
1,3,5-Trimethylbenzene	108-67-8	<0.000178	0.00500	0.000178	mg/L	09.05.17 14:20	U	1
o-Xylene	95-47-6	<0.000500	0.00500	0.000500	mg/L	09.05.17 14:20	U	1
m,p-Xylenes	179601-23-1	<0.00100	0.0100	0.00100	mg/L	09.05.17 14:20	U	1
Vinyl Chloride	75-01-4	<0.000232	0.00200	0.000232	mg/L	09.05.17 14:20	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Dibromofluoromethane	103	75 - 131	%		
1,2-Dichloroethane-D4	103	63 - 144	%		
Toluene-D8	101	80 - 117	%		
4-Bromofluorobenzene	98	74 - 124	%		



Certificate of Analytical Results

561295



Terracon Houston, Houston, TX

0.43 Acres of Land

Sample Id: **730534-1-BLK**

Matrix: Water

Sample Depth:

Lab Sample Id: 730534-1-BLK

Date Collected:

Date Received:

Analytical Method: PAHs by 8270C SIM

Prep Method: SW3511

Analyst: MNL

% Moist:

Tech: MNL

Seq Number: 3026966

Date Prep: 09.07.17 10.00

Subcontractor: SUB: TX104704295

Prep seq: 730534

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Acenaphthene	83-32-9	<0.000108	0.000180	0.000108	mg/L	09.07.17 13:34	U	1
Acenaphthylene	208-96-8	<0.000108	0.000180	0.000108	mg/L	09.07.17 13:34	U	1
Anthracene	120-12-7	<0.000108	0.000180	0.000108	mg/L	09.07.17 13:34	U	1
Benzo(a)anthracene	56-55-3	<0.000108	0.000180	0.000108	mg/L	09.07.17 13:34	U	1
Benzo(a)pyrene	50-32-8	<0.000108	0.000180	0.000108	mg/L	09.07.17 13:34	U	1
Benzo(b)fluoranthene	205-99-2	<0.000108	0.000180	0.000108	mg/L	09.07.17 13:34	U	1
Benzo(g,h,i)perylene	191-24-2	<0.000108	0.000180	0.000108	mg/L	09.07.17 13:34	U	1
Benzo(k)fluoranthene	207-08-9	<0.000108	0.000180	0.000108	mg/L	09.07.17 13:34	U	1
Chrysene	218-01-9	<0.000108	0.000180	0.000108	mg/L	09.07.17 13:34	U	1
Dibenz(a,h)anthracene	53-70-3	<0.000108	0.000180	0.000108	mg/L	09.07.17 13:34	U	1
Dibenzofuran	132-64-9	<0.000108	0.000180	0.000108	mg/L	09.07.17 13:34	U	1
Fluoranthene	206-44-0	<0.000108	0.000180	0.000108	mg/L	09.07.17 13:34	U	1
Fluorene	86-73-7	<0.000108	0.000180	0.000108	mg/L	09.07.17 13:34	U	1
Indeno(1,2,3-c,d)Pyrene	193-39-5	<0.000108	0.000180	0.000108	mg/L	09.07.17 13:34	U	1
Naphthalene	91-20-3	<0.000108	0.000360	0.000108	mg/L	09.07.17 13:34	U	1
Phenanthrene	85-01-8	<0.000108	0.000180	0.000108	mg/L	09.07.17 13:34	U	1
Pyrene	129-00-0	<0.000108	0.000180	0.000108	mg/L	09.07.17 13:34	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Nitrobenzene-d5	106	41 - 128	%		
2-Fluorobiphenyl	96	55 - 135	%		
Terphenyl-D14	115	54 - 131	%		



CHRONOLOGY OF HOLDING TIMES



Analytical Method : PAHs by 8270C SIM

Work Order #: **561295**

Date Received: 08/25/17

Client : Terracon Houston

Project ID: 92177354A

Field Sample ID	Lab Sample ID	Date Collected	Date Extracted	Max Holding Time Extracted (Days)	Time Held Extracted (Days)	Date Analyzed	Max Holding Time Analyzed (Days)	Time Held Analyzed (Days)	Q
TSP-3 (2-4)	561295-005	08/24/17	09/05/17	14	12	09/06/17	40	1	P

Analytical Method : Percent Moisture by SM2540G

Client : Terracon Houston

Work Order #: **561295**

Project ID: 92177354A

Date Received: 08/25/17

Field Sample ID	Lab Sample ID	Date Collected	Date Extracted	Max Holding Time	Time Held	Date Analyzed	Max Holding Time	Time Held	Q
				Extracted (Days)	Extracted (Days)	(Days)	Extracted (Days)	Analyzed (Days)	
TSP-1 (4-6)	561295-001	08/24/17				08/31/17	180	7	P
TSP-1 (10-12)	561295-002	08/24/17				08/31/17	180	7	P
TSP-2 (4-6)	561295-003	08/24/17				08/31/17	180	7	P
TSP-2 (8-10)	561295-004	08/24/17				08/31/17	180	7	P
TSP-3 (2-4)	561295-005	08/24/17				08/31/17	180	7	P
TSP-3 (8-10)	561295-006	08/24/17				08/31/17	180	7	P
TSP-4 (1-2)	561295-007	08/24/17				08/31/17	180	7	P
TSP-4 (12-14)	561295-008	08/24/17				08/31/17	180	7	P
TSP-5 (2-4)	561295-009	08/24/17				08/31/17	180	7	P
TSP-5 (10-12)	561295-010	08/24/17				08/31/17	180	7	P
Duplicate	561295-016	08/24/17				08/31/17	180	7	P

Analytical Method : VOAs by SW-846 8260

Client : Terracon Houston

 Work Order #: **561295**

Project ID: 92177354A

Date Received: 08/25/17

Field Sample ID	Lab Sample ID	Date Collected	Date Extracted	Max Holding Time	Time Held	Date Analyzed	Max Holding Time	Time Held	Q
				Extracted (Days)	Extracted (Days)	(Days)	Extracted (Days)	Analyzed (Days)	
TSP-1 (4-6)	561295-001	08/24/17				09/04/17	14	11	P
TSP-1 (10-12)	561295-002	08/24/17				09/04/17	14	11	P
TSP-2 (4-6)	561295-003	08/24/17				09/03/17	14	10	P
TSP-2 (8-10)	561295-004	08/24/17				09/03/17	14	10	P
TSP-3 (2-4)	561295-005	08/24/17				09/03/17	14	10	P
TSP-3 (8-10)	561295-006	08/24/17				09/04/17	14	11	P
TSP-4 (1-2)	561295-007	08/24/17				09/03/17	14	10	P
TSP-4 (12-14)	561295-008	08/24/17				09/04/17	14	11	P
TSP-5 (2-4)	561295-009	08/24/17				09/03/17	14	10	P
TSP-5 (10-12)	561295-010	08/24/17				09/04/17	14	11	P
TSP-1	561295-011	08/24/17				09/05/17	14	12	P
TSP-2	561295-012	08/24/17				09/03/17	14	10	P
TSP-3	561295-013	08/24/17				09/05/17	14	12	P
TSP-4	561295-014	08/24/17				09/05/17	14	12	P
TSP-5	561295-015	08/24/17				09/05/17	14	12	P
Duplicate	561295-016	08/24/17				09/03/17	14	10	P
Duplicate	561295-017	08/24/17				09/05/17	14	12	P
Equipment Blank	561295-018	08/24/17				09/05/17	14	12	P
Trip Blank	561295-019	08/24/17				09/05/17	14	12	P



CHRONOLOGY OF HOLDING TIMES



Analytical Method : PAHs by 8270C SIM

Work Order #: **561295**

Date Received: 08/25/17

Client : Terracon Houston

Project ID: 92177354A

Field Sample ID	Lab Sample ID	Date Collected	Date Extracted	Max Holding Time Extracted (Days)	Time Held Extracted (Days)	Date Analyzed	Max Holding Time Analyzed (Days)	Time Held Analyzed (Days)	Q
				7	14	09/07/17	40	0	F
TSP-5	561295-015	08/24/17	09/07/17						

Analytical Method : TPH by Texas1005

Client : Terracon Houston

Work Order #: **561295**

Project ID: 92177354A

Date Received: 08/25/17

Field Sample ID	Lab Sample ID	Date Collected	Date Extracted	Max	Time	Date Analyzed	Max	Time	Q
				Holding Time Extracted (Days)	Held Extracted (Days)		Holding Time Analyzed (Days)	Held Analyzed (Days)	
TSP-1 (4-6)	561295-001	08/24/17	08/30/17	14	6	08/30/17	14	0	P
TSP-1 (10-12)	561295-002	08/24/17	08/30/17	14	6	08/30/17	14	0	P
TSP-2 (4-6)	561295-003	08/24/17	08/30/17	14	6	08/30/17	14	0	P
TSP-2 (8-10)	561295-004	08/24/17	08/30/17	14	6	08/30/17	14	0	P
TSP-3 (2-4)	561295-005	08/24/17	08/30/17	14	6	08/31/17	14	1	P
TSP-3 (8-10)	561295-006	08/24/17	08/30/17	14	6	08/31/17	14	1	P
TSP-4 (1-2)	561295-007	08/24/17	08/30/17	14	6	08/30/17	14	0	P
TSP-4 (12-14)	561295-008	08/24/17	08/30/17	14	6	08/30/17	14	0	P
TSP-5 (2-4)	561295-009	08/24/17	08/30/17	14	6	08/30/17	14	0	P
TSP-5 (10-12)	561295-010	08/24/17	08/30/17	14	6	08/31/17	14	1	P
TSP-1	561295-011	08/24/17	08/25/17	14	1	08/31/17	14	6	P
TSP-2	561295-012	08/24/17	08/25/17	14	1	08/31/17	14	6	P
TSP-3	561295-013	08/24/17	08/25/17	14	1	08/31/17	14	6	P
TSP-4	561295-014	08/24/17	08/25/17	14	1	08/31/17	14	6	P
TSP-5	561295-015	08/24/17	08/25/17	14	1	08/31/17	14	6	P
Duplicate	561295-016	08/24/17	08/30/17	14	6	08/31/17	14	1	P
Duplicate	561295-017	08/24/17	08/25/17	14	1	09/01/17	14	7	P
Equipment Blank	561295-018	08/24/17	08/25/17	14	1	08/31/17	14	6	P

F = These samples were analyzed outside the recommended holding time.

P = Samples analyzed within the recommended holding time.

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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(602) 437-0330	



Analytical Log

Analytical Method: Percent Moisture by SM2540G Batch #: 3026271
Project Name: 0.43 Acres of Land Project ID: 92177354A
Client Name: Terracon Houston WO Number: 561295

Client Sample Id	Lab Sample Id	QC Types
TSP-1 (10-12)	561295-002	SMP
TSP-1 (4-6)	561295-001	SMP
TSP-2 (4-6)	561295-003	SMP
TSP-2 (8-10)	561295-004	SMP
TSP-3 (2-4)	561295-005	SMP
	3026271-1-BLK	BLK
	560970-049 D	MD
	561013-002 D	MD



Analytical Log

Analytical Method: Percent Moisture by SM2540G Batch #: 3026275
Project Name: 0.43 Acres of Land Project ID: 92177354A
Client Name: Terracon Houston WO Number: 561295

Client Sample Id	Lab Sample Id	QC Types
Duplicate	561295-016	SMP
TSP-3 (8-10)	561295-006	SMP
TSP-4 (1-2)	561295-007	SMP
TSP-4 (12-14)	561295-008	SMP
TSP-5 (10-12)	561295-010	SMP
TSP-5 (2-4)	561295-009	SMP
	3026275-1-BLK	BLK
	561202-001 D	MD
	561295-006 D	MD



Analytical Log

Analytical Method: TPH by Texas1005
Project Name: 0.43 Acres of Land
Client Name: Terracon Houston

Batch #: 3026305
Project ID: 92177354A
WO Number: 561295

Client Sample Id	Lab Sample Id	QC Types
Duplicate		SMP
TSP-1 (10-12)	561295-016	SMP
TSP-1 (4-6)	561295-002	SMP
TSP-2 (4-6)	561295-001	SMP
TSP-2 (8-10)	561295-003	SMP
TSP-3 (2-4)	561295-004	SMP
TSP-3 (8-10)	561295-005	SMP
TSP-4 (1-2)	561295-006	SMP
TSP-4 (12-14)	561295-007	SMP
TSP-5 (10-12)	561295-008	SMP
TSP-5 (2-4)	561295-010	SMP
	561295-009	SMP
	561295-004 S	MS
	561295-004 SD	MSD
	730099-1-BKS	BKS
	730099-1-BLK	BLK
	730099-1-BSD	BSD



Analytical Log

Analytical Method:	TPH by Texas1005	Batch #:	3026360
Project Name:	0.43 Acres of Land	Project ID:	92177354A
Client Name:	Terracon Houston	WO Number:	561295

Client Sample Id	Lab Sample Id	QC Types
Duplicate	561295-017	SMP
Equipment Blank	561295-018	SMP
TSP-1	561295-011	SMP
TSP-2	561295-012	SMP
TSP-3	561295-013	SMP
TSP-4	561295-014	SMP
TSP-5	561295-015	SMP
	561199-007 S	MS
	561295-012 S	MS
	561295-012 SD	MSD
	729947-1-BKS	BKS
	729947-1-BLK	BLK
	729947-1-BSD	BSD



Analytical Log

Analytical Method: VOAs by SW-846 8260 Batch #: 3026557
Project Name: 0.43 Acres of Land Project ID: 92177354A
Client Name: Terracon Houston WO Number: 561295

Client Sample Id	Lab Sample Id	QC Types
TSP-2	561295-012	SMP
TSP-2 DL	561295-012	DL
	561295-012 S	MS
	561295-012 SD	MSD
	730301-1-BKS	BKS
	730301-1-BLK	BLK
	730301-1-BSD	BSD



Analytical Log

Analytical Method: VOAs by SW-846 8260 Batch #: 3026581
Project Name: 0.43 Acres of Land Project ID: 92177354A
Client Name: Terracon Houston WO Number: 561295

Client Sample Id	Lab Sample Id	QC Types
Duplicate	561295-016	SMP
TSP-2 (4-6)	561295-003	SMP
TSP-2 (4-6) DL	561295-003	DL
TSP-2 (8-10)	561295-004	SMP
TSP-3 (2-4)	561295-005	SMP
TSP-4 (1-2)	561295-007	SMP
TSP-5 (2-4)	561295-009	SMP
	561295-004 S	MS
	561295-004 SD	MSD
	730314-1-BKS	BKS
	730314-1-BLK	BLK
	730314-1-BSD	BSD



Analytical Log

Analytical Method: VOAs by SW-846 8260 Batch #: 3026678
Project Name: 0.43 Acres of Land Project ID: 92177354A
Client Name: Terracon Houston WO Number: 561295

Client Sample Id	Lab Sample Id	QC Types
TSP-1 (10-12)	561295-002	SMP
TSP-1 (10-12) DL	561295-002	DL
TSP-1 (4-6)	561295-001	SMP
TSP-3 (8-10)	561295-006	SMP
TSP-4 (12-14)	561295-008	SMP
TSP-5 (10-12)	561295-010	SMP
	561295-008 S	MS
	730356-1-BKS	BKS
	730356-1-BLK	BLK
	730356-1-BSD	BSD



Analytical Log

Analytical Method: PAHs by 8270C SIM Batch #: 3026783
Project Name: 0.43 Acres of Land Project ID: 92177354A
Client Name: Terracon Houston WO Number: 561295

Client Sample Id	Lab Sample Id	QC Types
TSP-3 (2-4)	561295-005	SMP
	561312-023 S	MS
	561312-023 SD	MSD
	730324-1-BKS	BKS
	730324-1-BLK	BLK
	730324-1-BSD	BSD



Analytical Log

Analytical Method: VOAs by SW-846 8260 Batch #: 3026802
Project Name: 0.43 Acres of Land Project ID: 92177354A
Client Name: Terracon Houston WO Number: 561295

Client Sample Id	Lab Sample Id	QC Types
Duplicate	561295-017	SMP
TSP-1	561295-011	SMP
TSP-3	561295-013	SMP
TSP-4	561295-014	SMP
TSP-4 DL	561295-014	DL
TSP-5	561295-015	SMP
	561296-018 S	MS
	730433-1-BKS	BKS
	730433-1-BLK	BLK
	730433-1-BSD	BSD



Analytical Log

Analytical Method: VOAs by SW-846 8260 Batch #: 3026826
Project Name: 0.43 Acres of Land Project ID: 92177354A
Client Name: Terracon Houston WO Number: 561295

Client Sample Id	Lab Sample Id	QC Types
Equipment Blank	561295-018	SMP
Trip Blank	561295-019	SMP
	561234-004 S	MS
	730444-1-BKS	BKS
	730444-1-BLK	BLK
	730444-1-BSD	BSD



Analytical Log

Analytical Method: PAHs by 8270C SIM Batch #: 3026966
Project Name: 0.43 Acres of Land Project ID: 92177354A
Client Name: Terracon Houston WO Number: 561295

Client Sample Id	Lab Sample Id	QC Types
TSP-5	561295-015	SMP
	730534-1-BKS	BKS
	730534-1-BLK	BLK
	730534-1-BSD	BSD



Form 2 - Surrogate Recoveries

Project Name: 0.43 Acres of Land

Work Orders : 561295,

Lab Batch #: 3026783

Sample: 730324-1-BKS / BKS

Project ID: 92177354A

Batch: 1 **Matrix:** Solid

Units: mg/kg	Date Analyzed: 09/06/17 01:40	SURROGATE RECOVERY STUDY				
PAHs by 8270C SIM		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
Nitrobenzene-d5		0.861	1.00	86	31-130	
2-Fluorobiphenyl		0.985	1.00	99	51-133	
Terphenyl-D14		0.992	1.00	99	46-137	

Lab Batch #: 3026783

Sample: 730324-1-BSD / BSD

Batch: 1 **Matrix:** Solid

Units: mg/kg	Date Analyzed: 09/06/17 02:00	SURROGATE RECOVERY STUDY				
PAHs by 8270C SIM		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
Nitrobenzene-d5		0.968	1.00	97	31-130	
2-Fluorobiphenyl		1.06	1.00	106	51-133	
Terphenyl-D14		1.05	1.00	105	46-137	

Lab Batch #: 3026783

Sample: 561312-023 S / MS

Batch: 1 **Matrix:** Soil

Units: mg/kg	Date Analyzed: 09/06/17 05:15	SURROGATE RECOVERY STUDY				
PAHs by 8270C SIM		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
Nitrobenzene-d5		0.867	1.00	87	31-130	
2-Fluorobiphenyl		1.01	1.00	101	51-133	
Terphenyl-D14		1.05	1.00	105	46-137	

Lab Batch #: 3026783

Sample: 561312-023 SD / MSD

Batch: 1 **Matrix:** Soil

Units: mg/kg	Date Analyzed: 09/06/17 05:34	SURROGATE RECOVERY STUDY				
PAHs by 8270C SIM		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
Nitrobenzene-d5		0.747	1.00	75	31-130	
2-Fluorobiphenyl		0.911	1.00	91	51-133	
Terphenyl-D14		0.978	1.00	98	46-137	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries

Project Name: 0.43 Acres of Land

Work Orders : 561295,

Project ID: 92177354A

Lab Batch #: 3026783

Sample: 730324-1-BLK / BLK

Batch: 1 **Matrix:** Solid

Units: mg/kg	Date Analyzed: 09/06/17 09:10	SURROGATE RECOVERY STUDY				
PAHs by 8270C SIM		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
Nitrobenzene-d5		0.819	1.00	82	31-130	
2-Fluorobiphenyl		0.932	1.00	93	51-133	
Terphenyl-D14		1.00	1.00	100	46-137	

Lab Batch #: 3026966

Sample: 730534-1-BLK / BLK

Batch: 1 **Matrix:** Water

Units: mg/L	Date Analyzed: 09/07/17 13:34	SURROGATE RECOVERY STUDY				
PAHs by 8270C SIM		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
Nitrobenzene-d5		0.530	0.500	106	41-128	
2-Fluorobiphenyl		0.480	0.500	96	55-135	
Terphenyl-D14		0.576	0.500	115	54-131	

Lab Batch #: 3026966

Sample: 730534-1-BKS / BKS

Batch: 1 **Matrix:** Water

Units: mg/L	Date Analyzed: 09/07/17 14:50	SURROGATE RECOVERY STUDY				
PAHs by 8270C SIM		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
Nitrobenzene-d5		0.509	0.500	102	41-128	
2-Fluorobiphenyl		0.559	0.500	112	55-135	
Terphenyl-D14		0.376	0.500	75	54-131	

Lab Batch #: 3026966

Sample: 730534-1-BSD / BSD

Batch: 1 **Matrix:** Water

Units: mg/L	Date Analyzed: 09/07/17 15:05	SURROGATE RECOVERY STUDY				
PAHs by 8270C SIM		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
Nitrobenzene-d5		0.527	0.500	105	41-128	
2-Fluorobiphenyl		0.526	0.500	105	55-135	
Terphenyl-D14		0.346	0.500	69	54-131	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries

Project Name: 0.43 Acres of Land

Work Orders : 561295,

Project ID: 92177354A

Lab Batch #: 3026305

Sample: 730099-1-BLK / BLK

Batch: 1 **Matrix:**Solid

Units: mg/kg	Date Analyzed: 08/30/17 18:57	SURROGATE RECOVERY STUDY				
TPH by Texas1005		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
o-Terphenyl		49.3	50.0	99	70-130	
1-Chlorooctane		89.9	100	90	70-130	

Lab Batch #: 3026305

Sample: 730099-1-BKS / BKS

Batch: 1 **Matrix:**Solid

Units: mg/kg	Date Analyzed: 08/30/17 19:18	SURROGATE RECOVERY STUDY				
TPH by Texas1005		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
o-Terphenyl		47.4	50.0	95	70-130	
1-Chlorooctane		97.3	100	97	70-130	

Lab Batch #: 3026305

Sample: 730099-1-BSD / BSD

Batch: 1 **Matrix:**Solid

Units: mg/kg	Date Analyzed: 08/30/17 19:39	SURROGATE RECOVERY STUDY				
TPH by Texas1005		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
o-Terphenyl		50.1	50.0	100	70-130	
1-Chlorooctane		99.2	100	99	70-130	

Lab Batch #: 3026305

Sample: 561295-004 S / MS

Batch: 1 **Matrix:**Soil

Units: mg/kg	Date Analyzed: 08/30/17 20:20	SURROGATE RECOVERY STUDY				
TPH by Texas1005		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
o-Terphenyl		40.9	40.2	102	70-130	
1-Chlorooctane		82.6	80.5	103	70-130	

Lab Batch #: 3026305

Sample: 561295-004 SD / MSD

Batch: 1 **Matrix:**Soil

Units: mg/kg	Date Analyzed: 08/30/17 20:41	SURROGATE RECOVERY STUDY				
TPH by Texas1005		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
o-Terphenyl		37.1	37.7	98	70-130	
1-Chlorooctane		76.1	75.3	101	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries

Project Name: 0.43 Acres of Land

Work Orders : 561295,

Project ID: 92177354A

Lab Batch #: 3026360

Sample: 729947-1-BKS / BKS

Batch: 1 **Matrix:** Water

Units: mg/L	Date Analyzed: 08/30/17 15:56	SURROGATE RECOVERY STUDY				
TPH by Texas1005		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
o-Terphenyl		4.18	5.00	84	70-130	
1-Chlorooctane		8.75	10.0	88	70-130	

Lab Batch #: 3026360

Sample: 729947-1-BSD / BSD

Batch: 1 **Matrix:** Water

Units: mg/L	Date Analyzed: 08/30/17 16:17	SURROGATE RECOVERY STUDY				
TPH by Texas1005		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
o-Terphenyl		4.00	5.00	80	70-130	
1-Chlorooctane		8.44	10.0	84	70-130	

Lab Batch #: 3026360

Sample: 729947-1-BLK / BLK

Batch: 1 **Matrix:** Water

Units: mg/L	Date Analyzed: 08/30/17 16:38	SURROGATE RECOVERY STUDY				
TPH by Texas1005		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
o-Terphenyl		4.38	5.00	88	70-130	
1-Chlorooctane		8.59	10.0	86	70-130	

Lab Batch #: 3026360

Sample: 561199-007 S / MS

Batch: 1 **Matrix:** Water

Units: mg/L	Date Analyzed: 08/31/17 21:29	SURROGATE RECOVERY STUDY				
TPH by Texas1005		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
o-Terphenyl		5.26	4.85	108	70-130	
1-Chlorooctane		10.1	9.71	104	70-130	

Lab Batch #: 3026360

Sample: 561295-012 S / MS

Batch: 1 **Matrix:** Ground Water

Units: mg/L	Date Analyzed: 08/31/17 22:10	SURROGATE RECOVERY STUDY				
TPH by Texas1005		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
o-Terphenyl		5.16	5.21	99	70-130	
1-Chlorooctane		11.4	10.4	110	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries

Project Name: 0.43 Acres of Land

Work Orders : 561295,

Project ID: 92177354A

Lab Batch #: 3026360

Sample: 561295-012 SD / MSD

Batch: 1 **Matrix:** Ground Water

Units: mg/L	Date Analyzed: 08/31/17 22:31	SURROGATE RECOVERY STUDY				
TPH by Texas1005		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
o-Terphenyl		4.97	4.72	105	70-130	
1-Chlorooctane		10.1	9.45	107	70-130	

Lab Batch #: 3026557

Sample: 730301-1-BKS / BKS

Batch: 1 **Matrix:** Water

Units: mg/L	Date Analyzed: 09/02/17 12:21	SURROGATE RECOVERY STUDY				
VOAs by SW-846 8260		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane		0.0512	0.0500	102	75-131	
1,2-Dichloroethane-D4		0.0518	0.0500	104	63-144	
Toluene-D8		0.0490	0.0500	98	80-117	
4-Bromofluorobenzene		0.0490	0.0500	98	74-124	

Lab Batch #: 3026557

Sample: 561295-012 S / MS

Batch: 1 **Matrix:** Ground Water

Units: mg/L	Date Analyzed: 09/03/17 18:44	SURROGATE RECOVERY STUDY				
VOAs by SW-846 8260		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane		0.0515	0.0500	103	75-131	
1,2-Dichloroethane-D4		0.0500	0.0500	100	63-144	
Toluene-D8		0.0468	0.0500	94	80-117	
4-Bromofluorobenzene		0.0519	0.0500	104	74-124	

Lab Batch #: 3026557

Sample: 561295-012 SD / MSD

Batch: 1 **Matrix:** Ground Water

Units: mg/L	Date Analyzed: 09/03/17 18:44	SURROGATE RECOVERY STUDY				
VOAs by SW-846 8260		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane		0.0504	0.0500	101	75-131	
1,2-Dichloroethane-D4		0.0483	0.0500	97	63-144	
Toluene-D8		0.0482	0.0500	96	80-117	
4-Bromofluorobenzene		0.0525	0.0500	105	74-124	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: 0.43 Acres of Land

Work Orders : 561295,

Project ID: 92177354A

Lab Batch #: 3026557

Sample: 730301-1-BLK / BLK

Batch: 1 **Matrix:** Water

Units: mg/L	Date Analyzed: 09/03/17 18:44	SURROGATE RECOVERY STUDY				
VOAs by SW-846 8260		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
Dibromofluoromethane		0.0502	0.0500	100	75-131	
1,2-Dichloroethane-D4		0.0500	0.0500	100	63-144	
Toluene-D8		0.0506	0.0500	101	80-117	
4-Bromofluorobenzene		0.0485	0.0500	97	74-124	

Lab Batch #: 3026557

Sample: 730301-1-BSD / BSD

Batch: 1 **Matrix:** Water

Units: mg/L	Date Analyzed: 09/03/17 18:44	SURROGATE RECOVERY STUDY				
VOAs by SW-846 8260		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
Dibromofluoromethane		0.0512	0.0500	102	75-131	
1,2-Dichloroethane-D4		0.0497	0.0500	99	63-144	
Toluene-D8		0.0488	0.0500	98	80-117	
4-Bromofluorobenzene		0.0490	0.0500	98	74-124	

Lab Batch #: 3026581

Sample: 730314-1-BKS / BKS

Batch: 1 **Matrix:** Solid

Units: mg/kg	Date Analyzed: 09/03/17 10:39	SURROGATE RECOVERY STUDY				
VOAs by SW-846 8260		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
Dibromofluoromethane		0.0496	0.0500	99	53-142	
1,2-Dichloroethane-D4		0.0548	0.0500	110	56-150	
Toluene-D8		0.0501	0.0500	100	70-130	
4-Bromofluorobenzene		0.0506	0.0500	101	68-152	

Lab Batch #: 3026581

Sample: 730314-1-BSD / BSD

Batch: 1 **Matrix:** Solid

Units: mg/kg	Date Analyzed: 09/03/17 11:01	SURROGATE RECOVERY STUDY				
VOAs by SW-846 8260		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
Dibromofluoromethane		0.0495	0.0500	99	53-142	
1,2-Dichloroethane-D4		0.0476	0.0500	95	56-150	
Toluene-D8		0.0506	0.0500	101	70-130	
4-Bromofluorobenzene		0.0499	0.0500	100	68-152	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: 0.43 Acres of Land

Work Orders : 561295,

Lab Batch #: 3026581

Sample: 561295-004 S / MS

Project ID: 92177354A

Batch: 1 **Matrix:** Soil

Units: mg/kg	Date Analyzed: 09/03/17 11:26	SURROGATE RECOVERY STUDY				
VOAs by SW-846 8260		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
Dibromofluoromethane		0.0468	0.0500	94	53-142	
1,2-Dichloroethane-D4		0.0504	0.0500	101	56-150	
Toluene-D8		0.0497	0.0500	99	70-130	
4-Bromofluorobenzene		0.0555	0.0500	111	68-152	

Lab Batch #: 3026581

Sample: 561295-004 SD / MSD

Batch: 1 **Matrix:** Soil

Units: mg/kg	Date Analyzed: 09/03/17 11:49	SURROGATE RECOVERY STUDY				
VOAs by SW-846 8260		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
Dibromofluoromethane		0.0459	0.0500	92	53-142	
1,2-Dichloroethane-D4		0.0488	0.0500	98	56-150	
Toluene-D8		0.0496	0.0500	99	70-130	
4-Bromofluorobenzene		0.0549	0.0500	110	68-152	

Lab Batch #: 3026581

Sample: 730314-1-BLK / BLK

Batch: 1 **Matrix:** Solid

Units: mg/kg	Date Analyzed: 09/03/17 13:40	SURROGATE RECOVERY STUDY				
VOAs by SW-846 8260		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
Dibromofluoromethane		0.0467	0.0500	93	53-142	
1,2-Dichloroethane-D4		0.0516	0.0500	103	56-150	
Toluene-D8		0.0516	0.0500	103	70-130	
4-Bromofluorobenzene		0.0531	0.0500	106	68-152	

Lab Batch #: 3026678

Sample: 730356-1-BKS / BKS

Batch: 1 **Matrix:** Solid

Units: mg/kg	Date Analyzed: 09/04/17 11:10	SURROGATE RECOVERY STUDY				
VOAs by SW-846 8260		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
Dibromofluoromethane		0.0482	0.0500	96	53-142	
1,2-Dichloroethane-D4		0.0488	0.0500	98	56-150	
Toluene-D8		0.0497	0.0500	99	70-130	
4-Bromofluorobenzene		0.0511	0.0500	102	68-152	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: 0.43 Acres of Land

Work Orders : 561295,

Project ID: 92177354A

Lab Batch #: 3026678

Sample: 730356-1-BSD / BSD

Batch: 1 **Matrix:**Solid

Units: mg/kg	Date Analyzed: 09/04/17 11:32	SURROGATE RECOVERY STUDY				
VOAs by SW-846 8260		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
Dibromofluoromethane		0.0476	0.0500	95	53-142	
1,2-Dichloroethane-D4		0.0514	0.0500	103	56-150	
Toluene-D8		0.0497	0.0500	99	70-130	
4-Bromofluorobenzene		0.0498	0.0500	100	68-152	

Lab Batch #: 3026678

Sample: 561295-008 S / MS

Batch: 1 **Matrix:**Soil

Units: mg/kg	Date Analyzed: 09/04/17 12:42	SURROGATE RECOVERY STUDY				
VOAs by SW-846 8260		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
Dibromofluoromethane		0.0484	0.0500	97	53-142	
1,2-Dichloroethane-D4		0.0529	0.0500	106	56-150	
Toluene-D8		0.0502	0.0500	100	70-130	
4-Bromofluorobenzene		0.0529	0.0500	106	68-152	

Lab Batch #: 3026678

Sample: 730356-1-BLK / BLK

Batch: 1 **Matrix:**Solid

Units: mg/kg	Date Analyzed: 09/04/17 14:34	SURROGATE RECOVERY STUDY				
VOAs by SW-846 8260		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
Dibromofluoromethane		0.0458	0.0500	92	53-142	
1,2-Dichloroethane-D4		0.0508	0.0500	102	56-150	
Toluene-D8		0.0522	0.0500	104	70-130	
4-Bromofluorobenzene		0.0542	0.0500	108	68-152	

Lab Batch #: 3026802

Sample: 730433-1-BKS / BKS

Batch: 1 **Matrix:**Water

Units: mg/L	Date Analyzed: 09/05/17 10:51	SURROGATE RECOVERY STUDY				
VOAs by SW-846 8260		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
Dibromofluoromethane		0.0504	0.0500	101	75-131	
1,2-Dichloroethane-D4		0.0515	0.0500	103	63-144	
Toluene-D8		0.0496	0.0500	99	80-117	
4-Bromofluorobenzene		0.0511	0.0500	102	74-124	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: 0.43 Acres of Land

Work Orders : 561295,

Project ID: 92177354A

Lab Batch #: 3026802

Sample: 730433-1-BSD / BSD

Batch: 1 **Matrix:** Water

Units: mg/L	Date Analyzed: 09/05/17 11:36	SURROGATE RECOVERY STUDY				
VOAs by SW-846 8260		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
Dibromofluoromethane		0.0494	0.0500	99	75-131	
1,2-Dichloroethane-D4		0.0494	0.0500	99	63-144	
Toluene-D8		0.0494	0.0500	99	80-117	
4-Bromofluorobenzene		0.0504	0.0500	101	74-124	

Lab Batch #: 3026802

Sample: 561296-018 S / MS

Batch: 1 **Matrix:** Water

Units: mg/L	Date Analyzed: 09/05/17 11:58	SURROGATE RECOVERY STUDY				
VOAs by SW-846 8260		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
Dibromofluoromethane		0.0502	0.0500	100	75-131	
1,2-Dichloroethane-D4		0.0497	0.0500	99	63-144	
Toluene-D8		0.0500	0.0500	100	80-117	
4-Bromofluorobenzene		0.0501	0.0500	100	74-124	

Lab Batch #: 3026802

Sample: 730433-1-BLK / BLK

Batch: 1 **Matrix:** Water

Units: mg/L	Date Analyzed: 09/05/17 13:51	SURROGATE RECOVERY STUDY				
VOAs by SW-846 8260		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
Dibromofluoromethane		0.0506	0.0500	101	75-131	
1,2-Dichloroethane-D4		0.0506	0.0500	101	63-144	
Toluene-D8		0.0490	0.0500	98	80-117	
4-Bromofluorobenzene		0.0492	0.0500	98	74-124	

Lab Batch #: 3026826

Sample: 730444-1-BKS / BKS

Batch: 1 **Matrix:** Water

Units: mg/L	Date Analyzed: 09/05/17 10:48	SURROGATE RECOVERY STUDY				
VOAs by SW-846 8260		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
Dibromofluoromethane		0.0522	0.0500	104	75-131	
1,2-Dichloroethane-D4		0.0507	0.0500	101	63-144	
Toluene-D8		0.0482	0.0500	96	80-117	
4-Bromofluorobenzene		0.0494	0.0500	99	74-124	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries

Project Name: 0.43 Acres of Land

Work Orders : 561295,

Project ID: 92177354A

Lab Batch #: 3026826

Sample: 730444-1-BSD / BSD

Batch: 1 **Matrix:** Water

Units: mg/L	Date Analyzed: 09/05/17 12:19	SURROGATE RECOVERY STUDY				
VOAs by SW-846 8260		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
Dibromofluoromethane		0.0519	0.0500	104	75-131	
1,2-Dichloroethane-D4		0.0505	0.0500	101	63-144	
Toluene-D8		0.0485	0.0500	97	80-117	
4-Bromofluorobenzene		0.0501	0.0500	100	74-124	

Lab Batch #: 3026826

Sample: 561234-004 S / MS

Batch: 1 **Matrix:** Water

Units: mg/L	Date Analyzed: 09/05/17 12:47	SURROGATE RECOVERY STUDY				
VOAs by SW-846 8260		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
Dibromofluoromethane		0.0507	0.0500	101	75-131	
1,2-Dichloroethane-D4		0.0506	0.0500	101	63-144	
Toluene-D8		0.0485	0.0500	97	80-117	
4-Bromofluorobenzene		0.0502	0.0500	100	74-124	

Lab Batch #: 3026826

Sample: 730444-1-BLK / BLK

Batch: 1 **Matrix:** Water

Units: mg/L	Date Analyzed: 09/05/17 14:20	SURROGATE RECOVERY STUDY				
VOAs by SW-846 8260		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
Dibromofluoromethane		0.0513	0.0500	103	75-131	
1,2-Dichloroethane-D4		0.0517	0.0500	103	63-144	
Toluene-D8		0.0504	0.0500	101	80-117	
4-Bromofluorobenzene		0.0492	0.0500	98	74-124	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Project Name: 0.43 Acres of Land
Work Order #: 561295

Analyst: WEW

Date Prepared: 09/05/2017

Project ID: 92177354A

Lab Batch ID: 3026783

Sample: 730324-1-BKS

Batch #: 1

Date Analyzed: 09/06/2017

Units: mg/kg

Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
PAHs by 8270C SIM	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Acenaphthene	<0.000833	0.0333	0.0297	89	0.0333	0.0333	100	11	55-124	25	
Acenaphthylene	<0.000833	0.0333	0.0294	88	0.0333	0.0328	98	11	53-125	25	
Anthracene	<0.000833	0.0333	0.0306	92	0.0333	0.0340	102	11	53-125	25	
Benzo(a)anthracene	<0.000833	0.0333	0.0283	85	0.0333	0.0311	93	9	47-125	25	
Benzo(a)pyrene	<0.000833	0.0333	0.0303	91	0.0333	0.0342	103	12	52-125	25	
Benzo(b)fluoranthene	<0.000833	0.0333	0.0294	88	0.0333	0.0326	98	10	45-125	25	
Benzo(g,h,i)perylene	<0.000833	0.0333	0.0298	89	0.0333	0.0332	100	11	48-126	25	
Benzo(k)fluoranthene	<0.000833	0.0333	0.0359	108	0.0333	0.0396	119	10	54-125	25	
Chrysene	<0.000833	0.0333	0.0316	95	0.0333	0.0361	108	13	55-125	25	
Dibenz(a,h)anthracene	<0.000833	0.0333	0.0302	91	0.0333	0.0336	101	11	41-125	25	
Dibenzofuran	<0.000833	0.0333	0.0299	90	0.0333	0.0335	101	11	51-120	30	
Fluoranthene	<0.000833	0.0333	0.0332	100	0.0333	0.0370	111	11	54-125	25	
Fluorene	<0.000833	0.0333	0.0296	89	0.0333	0.0335	101	12	54-125	25	
Indeno(1,2,3-c,d)Pyrene	<0.000833	0.0333	0.0302	91	0.0333	0.0336	101	11	42-125	25	
Naphthalene	<0.000833	0.0333	0.0300	90	0.0333	0.0342	103	13	54-124	25	
Phenanthrene	<0.000833	0.0333	0.0302	91	0.0333	0.0339	102	12	53-123	25	
Pyrene	<0.000833	0.0333	0.0311	93	0.0333	0.0343	103	10	53-125	25	

 Relative Percent Difference RPD = $200 \times |(C-F)/(C+F)|$

 Blank Spike Recovery [D] = $100 \times (C)/[B]$

 Blank Spike Duplicate Recovery [G] = $100 \times (F)/[E]$

All results are based on MDL and Validated for QC Purposes

Project Name: 0.43 Acres of Land

Work Order #: 561295

Analyst: MNL

Lab Batch ID: 3026966

Sample: 730534-1-BKS

Date Prepared: 09/07/2017

Batch #: 1

Project ID: 92177354A

Date Analyzed: 09/07/2017

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

PAHs by 8270C SIM Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Acenaphthene	<0.000109	0.0181	0.0135	75	0.0180	0.0108	60	22	47-120	25	
Acenaphthylene	<0.000109	0.0181	0.0142	78	0.0180	0.0114	63	22	60-117	25	
Anthracene	<0.000109	0.0181	0.0195	108	0.0180	0.0206	114	5	60-117	25	
Benzo(a)anthracene	<0.000109	0.0181	0.0213	118	0.0180	0.0201	112	6	56-120	25	
Benzo(a)pyrene	<0.000109	0.0181	0.0188	104	0.0180	0.0175	97	7	65-120	25	
Benzo(b)fluoranthene	<0.000109	0.0181	0.0197	109	0.0180	0.0180	100	9	45-124	25	
Benzo(g,h,i)perylene	<0.000109	0.0181	0.0165	91	0.0180	0.0143	79	14	38-123	25	
Benzo(k)fluoranthene	<0.000109	0.0181	0.0186	103	0.0180	0.0202	112	8	45-124	25	
Chrysene	<0.000109	0.0181	0.0211	117	0.0180	0.0184	102	14	55-120	25	
Dibenz(a,h)anthracene	<0.000109	0.0181	0.0189	104	0.0180	0.0163	91	15	42-127	25	
Dibenzofuran	<0.000109	0.0181	0.0160	88	0.0180	0.0126	70	24	54-120	25	
Fluoranthene	<0.000109	0.0181	0.0195	108	0.0180	0.0200	111	3	54-120	25	
Fluorene	<0.000109	0.0181	0.0170	94	0.0180	0.0159	88	7	50-120	25	
Indeno(1,2,3-c,d)Pyrene	<0.000109	0.0181	0.0181	100	0.0180	0.0154	86	16	43-125	25	
Naphthalene	<0.000109	0.0181	0.0197	109	0.0180	0.0201	112	2	39-120	25	
Phenanthrene	<0.000109	0.0181	0.0188	104	0.0180	0.0199	111	6	51-120	25	
Pyrene	<0.000109	0.0181	0.0199	110	0.0180	0.0210	117	5	49-128	25	

 Relative Percent Difference RPD = $200 \times |(C-F)/(C+F)|$

 Blank Spike Recovery [D] = $100 \times (C)/[B]$

 Blank Spike Duplicate Recovery [G] = $100 \times (F)/[E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: 0.43 Acres of Land

Work Order #: 561295

Analyst: ARL

Lab Batch ID: 3026360

Sample: 729947-1-BKS

Units: mg/L

Date Prepared: 08/25/2017

Batch #: 1

Project ID: 92177354A

Date Analyzed: 08/30/2017

Matrix: Water

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
TPH by Texas1005 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Range Hydrocarbons	<0.160	100	82.0	82	100	79.5	80	3	70-130	25	
C12-C28 Range Hydrocarbons	<0.164	100	84.3	84	100	83.8	84	1	70-130	25	

Analyst: ARL

Date Prepared: 08/30/2017

Date Analyzed: 08/30/2017

Lab Batch ID: 3026305

Sample: 730099-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
TPH by Texas1005 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Range Hydrocarbons	<2.36	1000	903	90	1000	941	94	4	70-130	30	
C12-C28 Range Hydrocarbons	<1.62	1000	1040	104	1000	1110	111	7	70-130	30	

Relative Percent Difference RPD = $200 \times |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 \times (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 \times (F)/[E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: 0.43 Acres of Land

Work Order #: 561295

Analyst: SAD

Date Prepared: 09/02/2017

Project ID: 92177354A

Lab Batch ID: 3026557

Sample: 730301-1-BKS

Batch #: 1

Date Analyzed: 09/02/2017

Units: mg/L

Matrix: Water

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
VOAs by SW-846 8260 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000185	0.0500	0.0506	101	0.0500	0.0497	99	2	68-123	25	
Bromobenzene	<0.000258	0.0500	0.0476	95	0.0500	0.0477	95	0	83-124	25	
Bromochloromethane	<0.000328	0.0500	0.0495	99	0.0500	0.0486	97	2	68-119	25	
Bromodichloromethane	<0.000164	0.0500	0.0578	116	0.0500	0.0563	113	3	72-132	25	
Bromoform	<0.000348	0.0500	0.0617	123	0.0500	0.0612	122	1	65-136	25	
Bromomethane	<0.000127	0.0500	0.0583	117	0.0500	0.0559	112	4	48-120	25	
n-Butylbenzene	<0.00200	0.0500	0.0474	95	0.0500	0.0466	93	2	82-128	25	
Sec-Butylbenzene	0.000180	0.0500	0.0464	93	0.0500	0.0455	91	2	83-130	25	
tert-Butylbenzene	<0.000177	0.0500	0.0464	93	0.0500	0.0460	92	1	83-131	25	
Carbon Tetrachloride	<0.000243	0.0500	0.0572	114	0.0500	0.0526	105	8	68-135	25	
Chlorobenzene	<0.000110	0.0500	0.0491	98	0.0500	0.0490	98	0	78-124	25	
Chloroethane	<0.000190	0.0500	0.0568	114	0.0500	0.0546	109	4	55-120	25	
Chloroform	<0.000107	0.0500	0.0524	105	0.0500	0.0514	103	2	71-119	25	
Chloromethane	<0.00500	0.0500	0.0496	99	0.0500	0.0488	98	2	54-114	25	
2-Chlorotoluene	<0.000293	0.0500	0.0488	98	0.0500	0.0495	99	1	83-128	25	
4-Chlorotoluene	<0.000114	0.0500	0.0485	97	0.0500	0.0480	96	1	81-125	25	
p-Cymene (p-Isopropyltoluene)	<0.000150	0.0500	0.0457	91	0.0500	0.0449	90	2	85-129	25	
Dibromochloromethane	<0.000212	0.0500	0.0522	104	0.0500	0.0512	102	2	74-135	25	
1,2-Dibromo-3-Chloropropane	<0.000707	0.0500	0.0542	108	0.0500	0.0602	120	10	62-134	25	
1,2-Dibromoethane	<0.000380	0.0500	0.0508	102	0.0500	0.0507	101	0	77-129	25	

Relative Percent Difference RPD = $200 \times |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 \times (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 \times (F)/[E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: 0.43 Acres of Land

Work Order #: 561295

Analyst: SAD

Lab Batch ID: 3026557

Units: mg/L

Date Prepared: 09/02/2017

Sample: 730301-1-BKS

Batch #: 1

Project ID: 92177354A

Date Analyzed: 09/02/2017

Matrix: Water

VOAs by SW-846 8260 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Dibromomethane	<0.000186	0.0500	0.0527	105	0.0500	0.0519	104	2	71-124	25	
1,2-Dichlorobenzene	<0.000175	0.0500	0.0511	102	0.0500	0.0502	100	2	81-123	25	
1,3-Dichlorobenzene	<0.000169	0.0500	0.0499	100	0.0500	0.0488	98	2	82-126	25	
1,4-Dichlorobenzene	<0.000222	0.0500	0.0500	100	0.0500	0.0493	99	1	80-119	25	
Dichlorodifluoromethane	<0.000148	0.0500	0.0512	102	0.0500	0.0465	93	10	59-121	25	
1,1-Dichloroethane	<0.000182	0.0500	0.0509	102	0.0500	0.0503	101	1	75-125	25	
1,2-Dichloroethane	<0.000283	0.0500	0.0523	105	0.0500	0.0514	103	2	64-130	25	
1,1-Dichloroethene	<0.000178	0.0500	0.0494	99	0.0500	0.0480	96	3	68-116	25	
cis-1,2-Dichloroethene	<0.000162	0.0500	0.0497	99	0.0500	0.0497	99	0	74-130	25	
trans-1,2-dichloroethene	<0.000167	0.0500	0.0497	99	0.0500	0.0496	99	0	64-109	25	
1,2-Dichloropropane	<0.000170	0.0500	0.0495	99	0.0500	0.0496	99	0	72-127	25	
1,3-Dichloropropane	<0.000199	0.0500	0.0505	101	0.0500	0.0504	101	0	79-133	25	
2,2-Dichloropropane	<0.000154	0.0500	0.0554	111	0.0500	0.0494	99	11	71-134	25	
1,1-Dichloropropene	<0.000257	0.0500	0.0515	103	0.0500	0.0501	100	3	69-124	25	
cis-1,3-Dichloropropene	<0.000126	0.0500	0.0541	108	0.0500	0.0530	106	2	74-138	25	
trans-1,3-dichloropropene	<0.000198	0.0500	0.0539	108	0.0500	0.0534	107	1	70-132	25	
Ethylbenzene	0.000300	0.0500	0.0488	98	0.0500	0.0487	97	0	69-131	25	
Hexachlorobutadiene	<0.00200	0.0500	0.0491	98	0.0500	0.0421	84	15	74-130	25	
isopropylbenzene	<0.000218	0.0500	0.0494	99	0.0500	0.0488	98	1	66-133	25	
Methylene Chloride	<0.00200	0.0500	0.0496	99	0.0500	0.0480	96	3	60-121	25	

Relative Percent Difference RPD = $200 \times |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 \times (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 \times (F)/[E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: 0.43 Acres of Land

Work Order #: 561295

Analyst: SAD

Lab Batch ID: 3026557

Units: mg/L

Date Prepared: 09/02/2017

Sample: 730301-1-BKS

Batch #: 1

Project ID: 92177354A

Date Analyzed: 09/02/2017

Matrix: Water

VOAs by SW-846 8260 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
MTBE	<0.000500	0.0500	0.0529	106	0.0500	0.0526	105	1	60-152	25	
Naphthalene	<0.00200	0.0500	0.0563	113	0.0500	0.0576	115	2	69-140	25	
n-Propylbenzene	0.000210	0.0500	0.0468	94	0.0500	0.0465	93	1	86-129	25	
Styrene	<0.000197	0.0500	0.0518	104	0.0500	0.0509	102	2	79-128	25	
1,1,1,2-Tetrachloroethane	<0.000195	0.0500	0.0530	106	0.0500	0.0517	103	2	78-131	25	
1,1,2,2-Tetrachloroethane	<0.000365	0.0500	0.0514	103	0.0500	0.0534	107	4	80-133	25	
Tetrachloroethylene	<0.000347	0.0500	0.0468	94	0.0500	0.0466	93	0	79-122	25	
Toluene	<0.000500	0.0500	0.0478	96	0.0500	0.0478	96	0	62-132	25	
1,2,3-Trichlorobenzene	<0.00200	0.0500	0.0505	101	0.0500	0.0490	98	3	76-126	25	
1,2,4-Trichlorobenzene	<0.00200	0.0500	0.0477	95	0.0500	0.0475	95	0	77-127	25	
1,1,1-Trichloroethane	<0.000130	0.0500	0.0514	103	0.0500	0.0486	97	6	72-124	25	
1,1,2-Trichloroethane	<0.000272	0.0500	0.0506	101	0.0500	0.0513	103	1	71-135	25	
Trichloroethene	<0.000218	0.0500	0.0505	101	0.0500	0.0489	98	3	74-123	25	
Trichlorofluoromethane	<0.000191	0.0500	0.0571	114	0.0500	0.0518	104	10	70-143	25	
1,2,3-Trichloropropane	<0.000214	0.0500	0.0542	108	0.0500	0.0544	109	0	75-134	25	
1,2,4-Trimethylbenzene	0.000970	0.0500	0.0476	95	0.0500	0.0475	95	0	79-132	25	
1,3,5-Trimethylbenzene	0.000360	0.0500	0.0454	91	0.0500	0.0441	88	3	72-139	25	
o-Xylene	<0.000500	0.0500	0.0482	96	0.0500	0.0479	96	1	67-132	25	
m,p-Xylenes	0.00126	0.100	0.0968	97	0.100	0.0954	95	1	69-132	25	
Vinyl Chloride	<0.000232	0.0500	0.0522	104	0.0500	0.0498	100	5	59-124	25	

Relative Percent Difference RPD = $200 \times |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 \times (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 \times (F)/[E]$

All results are based on MDL and Validated for QC Purposes

Project Name: 0.43 Acres of Land

Work Order #: 561295

Analyst: MCH

Lab Batch ID: 3026802

Sample: 730433-1-BKS

Units: mg/L

Date Prepared: 09/05/2017

Batch #: 1

Project ID: 92177354A

Date Analyzed: 09/05/2017

Matrix: Water

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
VOAs by SW-846 8260 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000185	0.0500	0.0476	95	0.0500	0.0478	96	0	68-123	25	
Bromobenzene	<0.000258	0.0500	0.0497	99	0.0500	0.0493	99	1	83-124	25	
Bromochloromethane	<0.000328	0.0500	0.0476	95	0.0500	0.0486	97	2	68-119	25	
Bromodichloromethane	<0.000164	0.0500	0.0501	100	0.0500	0.0494	99	1	72-132	25	
Bromoform	<0.000348	0.0500	0.0544	109	0.0500	0.0529	106	3	65-136	25	
Bromomethane	<0.000127	0.0500	0.0437	87	0.0500	0.0414	83	5	48-120	25	
n-Butylbenzene	<0.00200	0.0500	0.0496	99	0.0500	0.0503	101	1	82-128	25	
Sec-Butylbenzene	<0.000124	0.0500	0.0493	99	0.0500	0.0496	99	1	83-130	25	
tert-Butylbenzene	<0.000177	0.0500	0.0488	98	0.0500	0.0491	98	1	83-131	25	
Carbon Tetrachloride	<0.000243	0.0500	0.0497	99	0.0500	0.0501	100	1	68-135	25	
Chlorobenzene	<0.000110	0.0500	0.0474	95	0.0500	0.0477	95	1	78-124	25	
Chloroethane	<0.000190	0.0500	0.0413	83	0.0500	0.0421	84	2	55-120	25	
Chloroform	<0.000107	0.0500	0.0484	97	0.0500	0.0484	97	0	71-119	25	
Chloromethane	<0.00500	0.0500	0.0417	83	0.0500	0.0414	83	1	54-114	25	
2-Chlorotoluene	<0.000293	0.0500	0.0494	99	0.0500	0.0495	99	0	83-128	25	
4-Chlorotoluene	<0.000114	0.0500	0.0483	97	0.0500	0.0483	97	0	81-125	25	
p-Cymene (p-Isopropyltoluene)	<0.000150	0.0500	0.0458	92	0.0500	0.0472	94	3	85-129	25	
Dibromochloromethane	<0.000212	0.0500	0.0524	105	0.0500	0.0525	105	0	74-135	25	
1,2-Dibromo-3-Chloropropane	<0.000707	0.0500	0.0550	110	0.0500	0.0532	106	3	62-134	25	
1,2-Dibromoethane	<0.000380	0.0500	0.0505	101	0.0500	0.0497	99	2	77-129	25	

 Relative Percent Difference RPD = $200 \times |(C-F)/(C+F)|$

 Blank Spike Recovery [D] = $100 \times (C)/[B]$

 Blank Spike Duplicate Recovery [G] = $100 \times (F)/[E]$

All results are based on MDL and Validated for QC Purposes

Project Name: 0.43 Acres of Land

Work Order #: 561295

Analyst: MCH

Lab Batch ID: 3026802

Units: mg/L

Date Prepared: 09/05/2017

Sample: 730433-1-BKS

Batch #: 1

Project ID: 92177354A

Date Analyzed: 09/05/2017

Matrix: Water

VOAs by SW-846 8260		Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes												
Dibromomethane	<0.000186	0.0500	0.0512	102	0.0500	0.0504	101	2	71-124	25		
1,2-Dichlorobenzene	<0.000175	0.0500	0.0497	99	0.0500	0.0490	98	1	81-123	25		
1,3-Dichlorobenzene	<0.000169	0.0500	0.0478	96	0.0500	0.0481	96	1	82-126	25		
1,4-Dichlorobenzene	<0.000222	0.0500	0.0483	97	0.0500	0.0485	97	0	80-119	25		
Dichlorodifluoromethane	<0.000148	0.0500	0.0504	101	0.0500	0.0513	103	2	59-121	25		
1,1-Dichloroethane	<0.000182	0.0500	0.0507	101	0.0500	0.0508	102	0	75-125	25		
1,2-Dichloroethane	<0.000283	0.0500	0.0480	96	0.0500	0.0482	96	0	64-130	25		
1,1-Dichloroethene	<0.000178	0.0500	0.0514	103	0.0500	0.0524	105	2	68-116	25		
cis-1,2-Dichloroethene	<0.000162	0.0500	0.0491	98	0.0500	0.0495	99	1	74-130	25		
trans-1,2-dichloroethene	<0.000167	0.0500	0.0498	100	0.0500	0.0499	100	0	64-109	25		
1,2-Dichloropropane	<0.000170	0.0500	0.0489	98	0.0500	0.0499	100	2	72-127	25		
1,3-Dichloropropane	<0.000199	0.0500	0.0496	99	0.0500	0.0492	98	1	79-133	25		
2,2-Dichloropropane	<0.000154	0.0500	0.0527	105	0.0500	0.0513	103	3	71-134	25		
1,1-Dichloropropene	<0.000257	0.0500	0.0489	98	0.0500	0.0487	97	0	69-124	25		
cis-1,3-Dichloropropene	<0.000126	0.0500	0.0514	103	0.0500	0.0506	101	2	74-138	25		
trans-1,3-dichloropropene	<0.000198	0.0500	0.0539	108	0.0500	0.0537	107	0	70-132	25		
Ethylbenzene	<0.000190	0.0500	0.0485	97	0.0500	0.0493	99	2	69-131	25		
Hexachlorobutadiene	<0.00200	0.0500	0.0463	93	0.0500	0.0472	94	2	74-130	25		
isopropylbenzene	<0.000218	0.0500	0.0472	94	0.0500	0.0478	96	1	66-133	25		
Methylene Chloride	<0.00200	0.0500	0.0501	100	0.0500	0.0499	100	0	60-121	25		

 Relative Percent Difference RPD = $200 \times |(C-F)/(C+F)|$

 Blank Spike Recovery [D] = $100 \times (C)/[B]$

 Blank Spike Duplicate Recovery [G] = $100 \times (F)/[E]$

All results are based on MDL and Validated for QC Purposes

Project Name: 0.43 Acres of Land

Work Order #: 561295

Analyst: MCH

Lab Batch ID: 3026802

Units: mg/L

Date Prepared: 09/05/2017

Sample: 730433-1-BKS

Batch #: 1

Project ID: 92177354A

Date Analyzed: 09/05/2017

Matrix: Water

VOAs by SW-846 8260		Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytics												
MTBE	<0.000500	0.0500	0.0508	102	0.0500	0.0501	100	1	60-152	25		
Naphthalene	<0.00200	0.0500	0.0535	107	0.0500	0.0543	109	1	69-140	25		
n-Propylbenzene	<0.000173	0.0500	0.0503	101	0.0500	0.0493	99	2	86-129	25		
Styrene	<0.000197	0.0500	0.0493	99	0.0500	0.0503	101	2	79-128	25		
1,1,1,2-Tetrachloroethane	<0.000195	0.0500	0.0471	94	0.0500	0.0475	95	1	78-131	25		
1,1,2,2-Tetrachloroethane	<0.000365	0.0500	0.0504	101	0.0500	0.0499	100	1	80-133	25		
Tetrachloroethylene	<0.000347	0.0500	0.0476	95	0.0500	0.0490	98	3	79-122	25		
Toluene	<0.000500	0.0500	0.0481	96	0.0500	0.0481	96	0	62-132	25		
1,2,3-Trichlorobenzene	<0.00200	0.0500	0.0471	94	0.0500	0.0483	97	3	76-126	25		
1,2,4-Trichlorobenzene	<0.00200	0.0500	0.0479	96	0.0500	0.0484	97	1	77-127	25		
1,1,1-Trichloroethane	<0.000130	0.0500	0.0495	99	0.0500	0.0502	100	1	72-124	25		
1,1,2-Trichloroethane	<0.000272	0.0500	0.0507	101	0.0500	0.0508	102	0	71-135	25		
Trichloroethene	<0.000218	0.0500	0.0477	95	0.0500	0.0483	97	1	74-123	25		
Trichlorofluoromethane	<0.000191	0.0500	0.0464	93	0.0500	0.0474	95	2	70-143	25		
1,2,3-Trichloropropane	<0.000214	0.0500	0.0532	106	0.0500	0.0517	103	3	75-134	25		
1,2,4-Trimethylbenzene	<0.000113	0.0500	0.0472	94	0.0500	0.0469	94	1	79-132	25		
1,3,5-Trimethylbenzene	<0.000178	0.0500	0.0498	100	0.0500	0.0503	101	1	72-139	25		
o-Xylene	<0.000500	0.0500	0.0489	98	0.0500	0.0492	98	1	67-132	25		
m,p-Xylenes	<0.00100	0.100	0.0964	96	0.100	0.0979	98	2	69-132	25		
Vinyl Chloride	<0.000232	0.0500	0.0443	89	0.0500	0.0442	88	0	59-124	25		

 Relative Percent Difference RPD = $200 \times |(C-F)/(C+F)|$

 Blank Spike Recovery [D] = $100 \times (C)/[B]$

 Blank Spike Duplicate Recovery [G] = $100 \times (F)/[E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: 0.43 Acres of Land

Work Order #: 561295

Analyst: SAD

Lab Batch ID: 3026826

Sample: 730444-1-BKS

Date Prepared: 09/05/2017

Batch #: 1

Project ID: 92177354A

Date Analyzed: 09/05/2017

Units: mg/L

Matrix: Water

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

VOAs by SW-846 8260 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000185	0.0500	0.0452	90	0.0500	0.0473	95	5	68-123	25	
Bromobenzene	<0.000258	0.0500	0.0448	90	0.0500	0.0471	94	5	83-124	25	
Bromochloromethane	<0.000328	0.0500	0.0472	94	0.0500	0.0482	96	2	68-119	25	
Bromodichloromethane	<0.000164	0.0500	0.0508	102	0.0500	0.0526	105	3	72-132	25	
Bromoform	<0.000348	0.0500	0.0429	86	0.0500	0.0445	89	4	65-136	25	
Bromomethane	<0.000127	0.0500	0.0446	89	0.0500	0.0444	89	0	48-120	25	
n-Butylbenzene	<0.00200	0.0500	0.0466	93	0.0500	0.0474	95	2	82-128	25	
Sec-Butylbenzene	<0.000124	0.0500	0.0450	90	0.0500	0.0468	94	4	83-130	25	
tert-Butylbenzene	<0.000177	0.0500	0.0455	91	0.0500	0.0472	94	4	83-131	25	
Carbon Tetrachloride	<0.000243	0.0500	0.0504	101	0.0500	0.0533	107	6	68-135	25	
Chlorobenzene	<0.000110	0.0500	0.0436	87	0.0500	0.0457	91	5	78-124	25	
Chloroethane	<0.000190	0.0500	0.0448	90	0.0500	0.0460	92	3	55-120	25	
Chloroform	<0.000107	0.0500	0.0486	97	0.0500	0.0501	100	3	71-119	25	
Chloromethane	<0.00500	0.0500	0.0429	86	0.0500	0.0439	88	2	54-114	25	
2-Chlorotoluene	<0.000293	0.0500	0.0444	89	0.0500	0.0476	95	7	83-128	25	
4-Chlorotoluene	<0.000114	0.0500	0.0446	89	0.0500	0.0469	94	5	81-125	25	
p-Cymene (p-Isopropyltoluene)	<0.000150	0.0500	0.0425	85	0.0500	0.0430	86	1	85-129	25	
Dibromochloromethane	<0.000212	0.0500	0.0479	96	0.0500	0.0498	100	4	74-135	25	
1,2-Dibromo-3-Chloropropane	<0.000707	0.0500	0.0462	92	0.0500	0.0470	94	2	62-134	25	
1,2-Dibromoethane	<0.000380	0.0500	0.0465	93	0.0500	0.0477	95	3	77-129	25	

Relative Percent Difference RPD = $200 \times |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 \times (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 \times (F)/[E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: 0.43 Acres of Land

Work Order #: 561295

Analyst: SAD

Lab Batch ID: 3026826

Units: mg/L

Date Prepared: 09/05/2017

Sample: 730444-1-BKS

Batch #: 1

Project ID: 92177354A

Date Analyzed: 09/05/2017

Matrix: Water

VOAs by SW-846 8260 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Dibromomethane	<0.000186	0.0500	0.0494	99	0.0500	0.0505	101	2	71-124	25	
1,2-Dichlorobenzene	<0.000175	0.0500	0.0458	92	0.0500	0.0472	94	3	81-123	25	
1,3-Dichlorobenzene	<0.000169	0.0500	0.0444	89	0.0500	0.0468	94	5	82-126	25	
1,4-Dichlorobenzene	<0.000222	0.0500	0.0447	89	0.0500	0.0473	95	6	80-119	25	
Dichlorodifluoromethane	<0.000148	0.0500	0.0585	117	0.0500	0.0568	114	3	59-121	25	
1,1-Dichloroethane	<0.000182	0.0500	0.0497	99	0.0500	0.0522	104	5	75-125	25	
1,2-Dichloroethane	<0.000283	0.0500	0.0500	100	0.0500	0.0504	101	1	64-130	25	
1,1-Dichloroethene	<0.000178	0.0500	0.0500	100	0.0500	0.0529	106	6	68-116	25	
cis-1,2-Dichloroethene	<0.000162	0.0500	0.0457	91	0.0500	0.0474	95	4	74-130	25	
trans-1,2-dichloroethene	<0.000167	0.0500	0.0468	94	0.0500	0.0488	98	4	64-109	25	
1,2-Dichloropropane	<0.000170	0.0500	0.0465	93	0.0500	0.0483	97	4	72-127	25	
1,3-Dichloropropane	<0.000199	0.0500	0.0447	89	0.0500	0.0458	92	2	79-133	25	
2,2-Dichloropropane	<0.000154	0.0500	0.0480	96	0.0500	0.0516	103	7	71-134	25	
1,1-Dichloropropene	<0.000257	0.0500	0.0477	95	0.0500	0.0507	101	6	69-124	25	
cis-1,3-Dichloropropene	<0.000126	0.0500	0.0502	100	0.0500	0.0521	104	4	74-138	25	
trans-1,3-dichloropropene	<0.000198	0.0500	0.0514	103	0.0500	0.0528	106	3	70-132	25	
Ethylbenzene	<0.000190	0.0500	0.0444	89	0.0500	0.0468	94	5	69-131	25	
Hexachlorobutadiene	<0.00200	0.0500	0.0586	117	0.0500	0.0547	109	7	74-130	25	
isopropylbenzene	<0.000218	0.0500	0.0436	87	0.0500	0.0454	91	4	66-133	25	
Methylene Chloride	<0.00200	0.0500	0.0476	95	0.0500	0.0503	101	6	60-121	25	

Relative Percent Difference RPD = $200 \times |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 \times (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 \times (F)/[E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: 0.43 Acres of Land

Work Order #: 561295

Analyst: SAD

Lab Batch ID: 3026826

Units: mg/L

Date Prepared: 09/05/2017

Sample: 730444-1-BKS

Batch #: 1

Project ID: 92177354A

Date Analyzed: 09/05/2017

Matrix: Water

VOAs by SW-846 8260 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
MTBE	<0.000500	0.0500	0.0483	97	0.0500	0.0490	98	1	60-152	25	
Naphthalene	<0.00200	0.0500	0.0517	103	0.0500	0.0510	102	1	69-140	25	
n-Propylbenzene	<0.000173	0.0500	0.0442	88	0.0500	0.0466	93	5	86-129	25	
Styrene	<0.000197	0.0500	0.0464	93	0.0500	0.0482	96	4	79-128	25	
1,1,1,2-Tetrachloroethane	<0.000195	0.0500	0.0442	88	0.0500	0.0463	93	5	78-131	25	
1,1,2,2-Tetrachloroethane	<0.000365	0.0500	0.0444	89	0.0500	0.0464	93	4	80-133	25	
Tetrachloroethylene	<0.000347	0.0500	0.0449	90	0.0500	0.0467	93	4	79-122	25	
Toluene	<0.000500	0.0500	0.0430	86	0.0500	0.0456	91	6	62-132	25	
1,2,3-Trichlorobenzene	<0.00200	0.0500	0.0432	86	0.0500	0.0416	83	4	76-126	25	
1,2,4-Trichlorobenzene	<0.00200	0.0500	0.0524	105	0.0500	0.0507	101	3	77-127	25	
1,1,1-Trichloroethane	<0.000130	0.0500	0.0497	99	0.0500	0.0518	104	4	72-124	25	
1,1,2-Trichloroethane	<0.000272	0.0500	0.0451	90	0.0500	0.0462	92	2	71-135	25	
Trichloroethene	<0.000218	0.0500	0.0467	93	0.0500	0.0493	99	5	74-123	25	
Trichlorofluoromethane	<0.000191	0.0500	0.0518	104	0.0500	0.0514	103	1	70-143	25	
1,2,3-Trichloropropane	<0.000214	0.0500	0.0464	93	0.0500	0.0485	97	4	75-134	25	
1,2,4-Trimethylbenzene	<0.000113	0.0500	0.0432	86	0.0500	0.0451	90	4	79-132	25	
1,3,5-Trimethylbenzene	<0.000178	0.0500	0.0446	89	0.0500	0.0477	95	7	72-139	25	
o-Xylene	<0.000500	0.0500	0.0453	91	0.0500	0.0478	96	5	67-132	25	
m,p-Xylenes	<0.00100	0.100	0.0877	88	0.100	0.0932	93	6	69-132	25	
Vinyl Chloride	<0.000232	0.0500	0.0462	92	0.0500	0.0472	94	2	59-124	25	

Relative Percent Difference RPD = $200 \times |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 \times (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 \times (F)/[E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: 0.43 Acres of Land

Work Order #: 561295

Analyst: MCH

Lab Batch ID: 3026581

Sample: 730314-1-BKS

Date Prepared: 09/03/2017

Batch #: 1

Project ID: 92177354A

Date Analyzed: 09/03/2017

Units: mg/kg

Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
VOAs by SW-846 8260 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000157	0.0500	0.0490	98	0.0500	0.0485	97	1	71-119	25	
Bromobenzene	<0.000438	0.0500	0.0490	98	0.0500	0.0495	99	1	84-123	25	
Bromochloromethane	<0.000475	0.0500	0.0494	99	0.0500	0.0497	99	1	71-120	25	
Bromodichloromethane	<0.000265	0.0500	0.0513	103	0.0500	0.0505	101	2	78-126	25	
Bromoform	<0.000698	0.0500	0.0460	92	0.0500	0.0465	93	1	63-136	25	
Bromomethane	<0.00106	0.0500	0.0447	89	0.0500	0.0450	90	1	57-118	25	
tert-Butylbenzene	<0.000206	0.0500	0.0524	105	0.0500	0.0522	104	0	83-132	25	
Sec-Butylbenzene	<0.000490	0.0500	0.0516	103	0.0500	0.0523	105	1	84-131	25	
n-Butylbenzene	<0.00200	0.0500	0.0528	106	0.0500	0.0529	106	0	82-127	25	
Carbon Tetrachloride	<0.000234	0.0500	0.0484	97	0.0500	0.0493	99	2	63-135	25	
Chlorobenzene	<0.000239	0.0500	0.0505	101	0.0500	0.0513	103	2	83-121	25	
Chloroethane	<0.000549	0.0500	0.0442	88	0.0500	0.0457	91	3	57-122	25	
Chloroform	<0.000292	0.0500	0.0487	97	0.0500	0.0481	96	1	74-118	25	
Chloromethane	<0.000299	0.0500	0.0453	91	0.0500	0.0443	89	2	71-132	25	
2-Chlorotoluene	<0.000392	0.0500	0.0512	102	0.0500	0.0521	104	2	83-129	25	
4-Chlorotoluene	<0.000439	0.0500	0.0528	106	0.0500	0.0514	103	3	83-125	25	
p-Cymene (p-Isopropyltoluene)	<0.000420	0.0500	0.0463	93	0.0500	0.0462	92	0	84-130	25	
1,2-Dibromo-3-Chloropropane	<0.00155	0.0500	0.0483	97	0.0500	0.0496	99	3	58-133	25	
Dibromochloromethane	<0.000473	0.0500	0.0468	94	0.0500	0.0471	94	1	77-130	25	
1,2-Dibromoethane	<0.000423	0.0500	0.0532	106	0.0500	0.0548	110	3	80-127	25	

Relative Percent Difference RPD = $200 \times |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 \times (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 \times (F)/[E]$

All results are based on MDL and Validated for QC Purposes

Project Name: 0.43 Acres of Land

Work Order #: 561295

Analyst: MCH

Lab Batch ID: 3026581

Units: mg/kg

Date Prepared: 09/03/2017

Sample: 730314-1-BKS

Batch #: 1

Project ID: 92177354A

Date Analyzed: 09/03/2017

Matrix: Solid

VOAs by SW-846 8260		Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes												
Dibromomethane	<0.000352	0.0500	0.0487	97	0.0500	0.0496	99	2	73-126	25		
1,2-Dichlorobenzene	<0.000431	0.0500	0.0514	103	0.0500	0.0511	102	1	84-121	25		
1,3-Dichlorobenzene	<0.000371	0.0500	0.0515	103	0.0500	0.0513	103	0	84-124	25		
1,4-Dichlorobenzene	<0.000238	0.0500	0.0520	104	0.0500	0.0509	102	2	82-120	25		
Dichlorodifluoromethane	<0.000426	0.0500	0.0495	99	0.0500	0.0499	100	1	54-122	25		
1,2-Dichloroethane	<0.000351	0.0500	0.0486	97	0.0500	0.0485	97	0	70-123	25		
1,1-Dichloroethane	<0.000201	0.0500	0.0489	98	0.0500	0.0491	98	0	73-124	25		
trans-1,2-dichloroethene	<0.000292	0.0500	0.0477	95	0.0500	0.0483	97	1	63-110	25		
cis-1,2-Dichloroethene	<0.000340	0.0500	0.0505	101	0.0500	0.0492	98	3	72-131	25		
1,1-Dichloroethene	<0.000237	0.0500	0.0487	97	0.0500	0.0499	100	2	71-122	25		
2,2-Dichloropropane	<0.00118	0.0500	0.0516	103	0.0500	0.0538	108	4	67-137	25		
1,3-Dichloropropane	<0.000250	0.0500	0.0518	104	0.0500	0.0526	105	2	82-131	25		
1,2-Dichloropropane	<0.000472	0.0500	0.0495	99	0.0500	0.0496	99	0	75-122	25		
trans-1,3-dichloropropene	<0.000303	0.0500	0.0478	96	0.0500	0.0493	99	3	73-125	25		
1,1-Dichloropropene	<0.000423	0.0500	0.0495	99	0.0500	0.0495	99	0	72-118	25		
cis-1,3-Dichloropropene	<0.000428	0.0500	0.0474	95	0.0500	0.0475	95	0	74-135	25		
Ethylbenzene	<0.000430	0.0500	0.0512	102	0.0500	0.0524	105	2	80-123	25		
Hexachlorobutadiene	<0.00200	0.0500	0.0502	100	0.0500	0.0506	101	1	77-130	25		
isopropylbenzene	<0.000167	0.0500	0.0461	92	0.0500	0.0479	96	4	55-155	25		
Methylene Chloride	<0.00500	0.0500	0.0465	93	0.0500	0.0464	93	0	57-134	25		

 Relative Percent Difference RPD = $200 \times |(C-F)/(C+F)|$

 Blank Spike Recovery [D] = $100 \times (C)/[B]$

 Blank Spike Duplicate Recovery [G] = $100 \times (F)/[E]$

All results are based on MDL and Validated for QC Purposes

Project Name: 0.43 Acres of Land

Work Order #: 561295

Analyst: MCH

Lab Batch ID: 3026581

Units: mg/kg

Date Prepared: 09/03/2017

Sample: 730314-1-BKS

Batch #: 1

Project ID: 92177354A

Date Analyzed: 09/03/2017

Matrix: Solid

VOAs by SW-846 8260		Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytics												
MTBE	<0.00100	0.0500	0.0501	100	0.0500	0.0498	100	1	64-148	25		
Naphthalene	<0.00200	0.0500	0.0492	98	0.0500	0.0497	99	1	53-162	25		
n-Propylbenzene	<0.000179	0.0500	0.0523	105	0.0500	0.0527	105	1	84-131	25		
Styrene	<0.000150	0.0500	0.0451	90	0.0500	0.0457	91	1	80-126	25		
1,1,1,2-Tetrachloroethane	<0.000407	0.0500	0.0455	91	0.0500	0.0463	93	2	81-127	25		
1,1,2,2-Tetrachloroethane	<0.000459	0.0500	0.0510	102	0.0500	0.0497	99	3	75-133	25		
Tetrachloroethylene	<0.000256	0.0500	0.0465	93	0.0500	0.0490	98	5	79-124	25		
Toluene	<0.00100	0.0500	0.0506	101	0.0500	0.0514	103	2	74-122	25		
1,2,3-Trichlorobenzene	<0.00200	0.0500	0.0501	100	0.0500	0.0516	103	3	75-131	25		
1,2,4-Trichlorobenzene	<0.00200	0.0500	0.0556	111	0.0500	0.0568	114	2	79-128	25		
1,1,2-Trichloroethane	<0.000326	0.0500	0.0517	103	0.0500	0.0535	107	3	75-131	25		
1,1,1-Trichloroethane	<0.000339	0.0500	0.0487	97	0.0500	0.0498	100	2	71-124	25		
Trichloroethene	<0.000327	0.0500	0.0482	96	0.0500	0.0479	96	1	78-119	25		
Trichlorofluoromethane	<0.000485	0.0500	0.0474	95	0.0500	0.0485	97	2	71-148	25		
1,2,3-Trichloropropane	<0.000701	0.0500	0.0538	108	0.0500	0.0536	107	0	75-131	25		
1,2,4-Trimethylbenzene	<0.000113	0.0500	0.0526	105	0.0500	0.0521	104	1	60-159	25		
1,3,5-Trimethylbenzene	<0.000397	0.0500	0.0527	105	0.0500	0.0531	106	1	61-160	25		
Vinyl Chloride	<0.000827	0.0500	0.0442	88	0.0500	0.0449	90	2	60-123	25		
o-Xylene	<0.000500	0.0500	0.0496	99	0.0500	0.0517	103	4	79-125	25		
m,p-Xylenes	<0.00100	0.100	0.104	104	0.100	0.107	107	3	78-127	25		

 Relative Percent Difference RPD = $200 \times |(C-F)/(C+F)|$

 Blank Spike Recovery [D] = $100 \times (C)/[B]$

 Blank Spike Duplicate Recovery [G] = $100 \times (F)/[E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: 0.43 Acres of Land

Work Order #: 561295

Analyst: MCH

Date Prepared: 09/04/2017

Project ID: 92177354A

Lab Batch ID: 3026678

Sample: 730356-1-BKS

Batch #: 1

Date Analyzed: 09/04/2017

Units: mg/kg

Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
VOAs by SW-846 8260 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000157	0.0500	0.0442	88	0.0500	0.0460	92	4	71-119	25	
Bromobenzene	<0.000438	0.0500	0.0455	91	0.0500	0.0464	93	2	84-123	25	
Bromochloromethane	<0.000475	0.0500	0.0458	92	0.0500	0.0458	92	0	71-120	25	
Bromodichloromethane	<0.000265	0.0500	0.0470	94	0.0500	0.0482	96	3	78-126	25	
Bromoform	<0.000698	0.0500	0.0439	88	0.0500	0.0458	92	4	63-136	25	
Bromomethane	<0.00106	0.0500	0.0462	92	0.0500	0.0480	96	4	57-118	25	
tert-Butylbenzene	<0.000206	0.0500	0.0502	100	0.0500	0.0514	103	2	83-132	25	
Sec-Butylbenzene	<0.000490	0.0500	0.0479	96	0.0500	0.0484	97	1	84-131	25	
n-Butylbenzene	<0.00200	0.0500	0.0488	98	0.0500	0.0502	100	3	82-127	25	
Carbon Tetrachloride	<0.000234	0.0500	0.0449	90	0.0500	0.0467	93	4	63-135	25	
Chlorobenzene	<0.000239	0.0500	0.0477	95	0.0500	0.0485	97	2	83-121	25	
Chloroethane	<0.000549	0.0500	0.0539	108	0.0500	0.0514	103	5	57-122	25	
Chloroform	<0.000292	0.0500	0.0433	87	0.0500	0.0452	90	4	74-118	25	
Chloromethane	<0.000299	0.0500	0.0433	87	0.0500	0.0449	90	4	71-132	25	
2-Chlorotoluene	<0.000392	0.0500	0.0478	96	0.0500	0.0486	97	2	83-129	25	
4-Chlorotoluene	<0.000439	0.0500	0.0488	98	0.0500	0.0487	97	0	83-125	25	
p-Cymene (p-Isopropyltoluene)	<0.000420	0.0500	0.0430	86	0.0500	0.0440	88	2	84-130	25	
1,2-Dibromo-3-Chloropropane	<0.00155	0.0500	0.0478	96	0.0500	0.0514	103	7	58-133	25	
Dibromochloromethane	<0.000473	0.0500	0.0442	88	0.0500	0.0455	91	3	77-130	25	
1,2-Dibromoethane	<0.000423	0.0500	0.0512	102	0.0500	0.0517	103	1	80-127	25	

Relative Percent Difference RPD = $200 \times |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 \times (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 \times (F)/[E]$

All results are based on MDL and Validated for QC Purposes

Project Name: 0.43 Acres of Land

Work Order #: 561295

Analyst: MCH

Lab Batch ID: 3026678

Units: mg/kg

Date Prepared: 09/04/2017

Sample: 730356-1-BKS

Batch #: 1

Project ID: 92177354A

Date Analyzed: 09/04/2017

Matrix: Solid

VOAs by SW-846 8260		Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes												
Dibromomethane	<0.000352	0.0500	0.0459	92	0.0500	0.0460	92	0	73-126	25		
1,2-Dichlorobenzene	<0.000431	0.0500	0.0483	97	0.0500	0.0484	97	0	84-121	25		
1,3-Dichlorobenzene	<0.000371	0.0500	0.0481	96	0.0500	0.0483	97	0	84-124	25		
1,4-Dichlorobenzene	<0.000238	0.0500	0.0478	96	0.0500	0.0473	95	1	82-120	25		
Dichlorodifluoromethane	<0.000426	0.0500	0.0558	112	0.0500	0.0599	120	7	54-122	25		
1,2-Dichloroethane	<0.000351	0.0500	0.0434	87	0.0500	0.0455	91	5	70-123	25		
1,1-Dichloroethane	<0.000201	0.0500	0.0423	85	0.0500	0.0438	88	3	73-124	25		
trans-1,2-dichloroethene	<0.000292	0.0500	0.0434	87	0.0500	0.0456	91	5	63-110	25		
cis-1,2-Dichloroethene	<0.000340	0.0500	0.0451	90	0.0500	0.0467	93	3	72-131	25		
1,1-Dichloroethene	<0.000237	0.0500	0.0451	90	0.0500	0.0463	93	3	71-122	25		
2,2-Dichloropropane	<0.00118	0.0500	0.0481	96	0.0500	0.0507	101	5	67-137	25		
1,3-Dichloropropane	<0.000250	0.0500	0.0480	96	0.0500	0.0481	96	0	82-131	25		
1,2-Dichloropropane	<0.000472	0.0500	0.0452	90	0.0500	0.0455	91	1	75-122	25		
trans-1,3-dichloropropene	<0.000303	0.0500	0.0451	90	0.0500	0.0468	94	4	73-125	25		
1,1-Dichloropropene	<0.000423	0.0500	0.0428	86	0.0500	0.0448	90	5	72-118	25		
cis-1,3-Dichloropropene	<0.000428	0.0500	0.0439	88	0.0500	0.0439	88	0	74-135	25		
Ethylbenzene	<0.000430	0.0500	0.0479	96	0.0500	0.0494	99	3	80-123	25		
Hexachlorobutadiene	<0.00200	0.0500	0.0513	103	0.0500	0.0545	109	6	77-130	25		
isopropylbenzene	<0.000167	0.0500	0.0447	89	0.0500	0.0461	92	3	55-155	25		
Methylene Chloride	<0.00500	0.0500	0.0403	81	0.0500	0.0408	82	1	57-134	25		

 Relative Percent Difference RPD = $200 \times |(C-F)/(C+F)|$

 Blank Spike Recovery [D] = $100 \times (C)/[B]$

 Blank Spike Duplicate Recovery [G] = $100 \times (F)/[E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: 0.43 Acres of Land

Work Order #: 561295

Analyst: MCH

Lab Batch ID: 3026678

Sample: 730356-1-BKS

Units: mg/kg

Project ID: 92177354A

Date Prepared: 09/04/2017

Batch #: 1

Matrix: Solid

VOAs by SW-846 8260	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
MTBE	<0.00100	0.0500	0.0472	94	0.0500	0.0477	95	1	64-148	25	
Naphthalene	<0.00200	0.0500	0.0538	108	0.0500	0.0539	108	0	53-162	25	
n-Propylbenzene	<0.000179	0.0500	0.0484	97	0.0500	0.0487	97	1	84-131	25	
Styrene	<0.000150	0.0500	0.0426	85	0.0500	0.0443	89	4	80-126	25	
1,1,1,2-Tetrachloroethane	<0.000407	0.0500	0.0430	86	0.0500	0.0455	91	6	81-127	25	
1,1,2,2-Tetrachloroethane	<0.000459	0.0500	0.0471	94	0.0500	0.0471	94	0	75-133	25	
Tetrachloroethylene	<0.000256	0.0500	0.0443	89	0.0500	0.0464	93	5	79-124	25	
Toluene	<0.00100	0.0500	0.0462	92	0.0500	0.0474	95	3	74-122	25	
1,2,3-Trichlorobenzene	<0.00200	0.0500	0.0577	115	0.0500	0.0579	116	0	75-131	25	
1,2,4-Trichlorobenzene	<0.00200	0.0500	0.0596	119	0.0500	0.0618	124	4	79-128	25	
1,1,2-Trichloroethane	<0.000326	0.0500	0.0487	97	0.0500	0.0488	98	0	75-131	25	
1,1,1-Trichloroethane	<0.000339	0.0500	0.0450	90	0.0500	0.0467	93	4	71-124	25	
Trichloroethene	<0.000327	0.0500	0.0451	90	0.0500	0.0472	94	5	78-119	25	
Trichlorofluoromethane	<0.000485	0.0500	0.0591	118	0.0500	0.0609	122	3	71-148	25	
1,2,3-Trichloropropane	<0.000701	0.0500	0.0505	101	0.0500	0.0517	103	2	75-131	25	
1,2,4-Trimethylbenzene	<0.000113	0.0500	0.0481	96	0.0500	0.0489	98	2	60-159	25	
1,3,5-Trimethylbenzene	<0.000397	0.0500	0.0482	96	0.0500	0.0487	97	1	61-160	25	
Vinyl Chloride	<0.000827	0.0500	0.0448	90	0.0500	0.0474	95	6	60-123	25	
o-Xylene	<0.000500	0.0500	0.0473	95	0.0500	0.0492	98	4	79-125	25	
m,p-Xylenes	<0.00100	0.100	0.0977	98	0.100	0.101	101	3	78-127	25	

Relative Percent Difference RPD = $200 \times |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 \times (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 \times (F)/[E]$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries

Project Name: 0.43 Acres of Land



Work Order #: 561295

Lab Batch #: 3026360

Date Analyzed: 08/31/2017

QC- Sample ID: 561199-007 S

Reporting Units: mg/L

Project ID: 92177354A

Date Prepared: 08/25/2017

Batch #: 1

Analyst: ARL

Matrix: Water

MATRIX / MATRIX SPIKE RECOVERY STUDY

TPH by Texas1005 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
C6-C12 Range Hydrocarbons	<0.155	97.1	94.6	97	70-130	
C12-C28 Range Hydrocarbons	<0.160	97.1	106	109	70-130	

Matrix Spike Percent Recovery [D] = $100*(C-A)/B$
Relative Percent Difference [E] = $200*(C-A)/(C+B)$
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS Recoveries

Project Name: 0.43 Acres of Land



Work Order #: 561295

Lab Batch #: 3026678

Date Analyzed: 09/04/2017

QC- Sample ID: 561295-008 S

Reporting Units: mg/kg

Project ID: 92177354A

Date Prepared: 09/04/2017

Batch #: 1

Analyst: MCH

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
VOCs by SW-846 8260B	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						

Benzene	0.00760	0.0447	0.0361	64	66-142	X
Bromobenzene	<0.000391	0.0447	0.0317	71	75-125	X
Bromochloromethane	<0.000424	0.0447	0.0321	72	60-140	
Bromodichloromethane	<0.000237	0.0447	0.0326	73	75-125	X
Bromoform	<0.000624	0.0447	0.0284	64	75-125	X
Bromomethane	<0.000944	0.0447	0.0245	55	60-140	X
tert-Butylbenzene	<0.000184	0.0447	0.0400	89	75-125	
Sec-Butylbenzene	<0.000438	0.0447	0.0390	87	75-125	
n-Butylbenzene	<0.00179	0.0447	0.0390	87	75-125	
Carbon Tetrachloride	<0.000209	0.0447	0.0365	82	62-125	
Chlorobenzene	<0.000214	0.0447	0.0343	77	60-133	
Chloroethane	<0.000490	0.0447	0.0330	74	60-140	
Chloroform	<0.000261	0.0447	0.0319	71	74-125	X
Chloromethane	<0.000267	0.0447	0.0234	52	60-140	X
2-Chlorotoluene	<0.000351	0.0447	0.0354	79	73-125	
4-Chlorotoluene	<0.000392	0.0447	0.0359	80	74-125	
p-Cymene (p-Isopropyltoluene)	<0.000376	0.0447	0.0335	75	75-125	
1,2-Dibromo-3-Chloropropane	<0.00139	0.0447	0.0325	73	59-125	
Dibromochloromethane	<0.000422	0.0447	0.0288	64	73-125	X
1,2-Dibromoethane	<0.000378	0.0447	0.0332	74	73-125	
Dibromomethane	<0.000315	0.0447	0.0307	69	69-127	
1,2-Dichlorobenzene	<0.000385	0.0447	0.0330	74	75-125	X
1,3-Dichlorobenzene	<0.000332	0.0447	0.0338	76	75-125	
1,4-Dichlorobenzene	<0.000212	0.0447	0.0334	75	75-125	
Dichlorodifluoromethane	<0.000380	0.0447	0.0386	86	65-135	
1,2-Dichloroethane	<0.000313	0.0447	0.0307	69	68-127	
1,1-Dichloroethane	<0.000180	0.0447	0.0316	71	72-125	X
trans-1,2-dichloroethene	<0.000261	0.0447	0.0342	77	75-125	
cis-1,2-Dichloroethene	<0.000304	0.0447	0.0340	76	75-125	
1,1-Dichloroethene	<0.000212	0.0447	0.0368	82	59-172	
2,2-Dichloropropane	<0.00106	0.0447	0.0396	89	75-125	
1,3-Dichloropropane	<0.000223	0.0447	0.0324	72	75-125	X
1,2-Dichloropropane	<0.000422	0.0447	0.0322	72	74-125	X
trans-1,3-dichloropropene	<0.000271	0.0447	0.0315	70	66-125	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Relative Percent Difference [E] = 200*(C-A)/(C+B)

All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS Recoveries

Project Name: 0.43 Acres of Land



Work Order #: 561295

Lab Batch #: 3026678

Date Analyzed: 09/04/2017

QC- Sample ID: 561295-008 S

Reporting Units: mg/kg

Project ID: 92177354A

Date Prepared: 09/04/2017

Batch #: 1

Analyst: MCH

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
VOCs by SW-846 8260B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
1,1-Dichloropropene	<0.000378	0.0447	0.0355	79	75-125	
cis-1,3-Dichloropropene	<0.000382	0.0447	0.0312	70	74-125	X
Ethylbenzene	<0.000384	0.0447	0.0368	82	75-125	
Hexachlorobutadiene	<0.00179	0.0447	0.0418	94	75-125	
isopropylbenzene	<0.000149	0.0447	0.0353	79	75-125	
Methylene Chloride	<0.00447	0.0447	0.0291	65	71-132	X
MTBE	0.000996	0.0447	0.0324	70	60-140	
Naphthalene	<0.00179	0.0447	0.0383	86	70-130	
n-Propylbenzene	<0.000160	0.0447	0.0381	85	75-125	
Styrene	<0.000134	0.0447	0.0305	68	75-125	X
1,1,1,2-Tetrachloroethane	<0.000364	0.0447	0.0312	70	72-125	X
1,1,2,2-Tetrachloroethane	<0.000410	0.0447	0.0315	70	74-125	X
Tetrachloroethylene	<0.000229	0.0447	0.0371	83	71-125	
Toluene	<0.000893	0.0447	0.0360	81	59-139	
1,2,3-Trichlorobenzene	<0.00179	0.0447	0.0401	90	75-137	
1,2,4-Trichlorobenzene	<0.00179	0.0447	0.0422	94	75-135	
1,1,2-Trichloroethane	<0.000291	0.0447	0.0349	78	75-127	
1,1,1-Trichloroethane	<0.000303	0.0447	0.0367	82	75-125	
Trichloroethene	<0.000292	0.0447	0.0368	82	62-137	
Trichlorofluoromethane	<0.000434	0.0447	0.0355	79	67-125	
1,2,3-Trichloropropane	<0.000627	0.0447	0.0334	75	75-125	
1,2,4-Trimethylbenzene	<0.000101	0.0447	0.0360	81	75-125	
1,3,5-Trimethylbenzene	<0.000355	0.0447	0.0371	83	70-130	
Vinyl Chloride	<0.000739	0.0447	0.0264	59	60-140	X
o-Xylene	<0.000447	0.0447	0.0352	79	75-125	
m,p-Xylenes	<0.000893	0.0893	0.0728	82	75-125	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Relative Percent Difference [E] = 200*(C-A)/(C+B)

All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS Recoveries

Project Name: 0.43 Acres of Land



Work Order #: 561295

Lab Batch #: 3026802

Date Analyzed: 09/05/2017

QC-Sample ID: 561296-018 S

Reporting Units: mg/L

Project ID: 92177354A

Date Prepared: 09/05/2017

Analyst: MCH

Batch #: 1

Matrix: Water

MATRIX / MATRIX SPIKE RECOVERY STUDY						
VOCs by SW-846 8260B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Benzene	<0.000185	0.0500	0.0482	96	66-142	
Bromobenzene	<0.000258	0.0500	0.0494	99	75-125	
Bromochloromethane	<0.000328	0.0500	0.0489	98	60-140	
Bromodichloromethane	<0.000164	0.0500	0.0502	100	75-125	
Bromoform	<0.000348	0.0500	0.0565	113	75-125	
Bromomethane	<0.000127	0.0500	0.0411	82	60-140	
n-Butylbenzene	<0.00200	0.0500	0.0514	103	75-125	
Sec-Butylbenzene	<0.000124	0.0500	0.0505	101	75-125	
tert-Butylbenzene	<0.000177	0.0500	0.0498	100	75-125	
Carbon Tetrachloride	<0.000243	0.0500	0.0523	105	62-125	
Chlorobenzene	<0.000110	0.0500	0.0488	98	60-133	
Chloroethane	<0.000190	0.0500	0.0417	83	60-140	
Chloroform	<0.000107	0.0500	0.0490	98	70-130	
Chloromethane	<0.00500	0.0500	0.0431	86	60-140	
2-Chlorotoluene	<0.000293	0.0500	0.0491	98	73-125	
4-Chlorotoluene	<0.000114	0.0500	0.0487	97	74-125	
p-Cymene (p-Isopropyltoluene)	<0.000150	0.0500	0.0473	95	75-125	
Dibromochloromethane	<0.000212	0.0500	0.0541	108	73-125	
1,2-Dibromo-3-Chloropropane	<0.000707	0.0500	0.0669	134	59-125	X
1,2-Dibromoethane	<0.000380	0.0500	0.0527	105	73-125	
Dibromomethane	<0.000186	0.0500	0.0511	102	69-127	
1,2-Dichlorobenzene	<0.000175	0.0500	0.0517	103	75-125	
1,3-Dichlorobenzene	<0.000169	0.0500	0.0493	99	75-125	
1,4-Dichlorobenzene	<0.000222	0.0500	0.0501	100	75-125	
Dichlorodifluoromethane	<0.000148	0.0500	0.0533	107	70-130	
1,1-Dichloroethane	<0.000182	0.0500	0.0520	104	72-125	
1,2-Dichloroethane	<0.000283	0.0500	0.0498	100	68-127	
1,1-Dichloroethene	<0.000178	0.0500	0.0530	106	59-172	
cis-1,2-Dichloroethene	<0.000162	0.0500	0.0507	101	75-125	
trans-1,2-dichloroethene	<0.000167	0.0500	0.0498	100	75-125	
1,2-Dichloropropane	<0.000170	0.0500	0.0503	101	74-125	
1,3-Dichloropropane	<0.000199	0.0500	0.0512	102	75-125	
2,2-Dichloropropane	<0.000154	0.0500	0.0537	107	60-125	
1,1-Dichloropropene	<0.000257	0.0500	0.0505	101	75-125	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Relative Percent Difference [E] = 200*(C-A)/(C+B)

All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS Recoveries

Project Name: 0.43 Acres of Land



Work Order #: 561295

Lab Batch #: 3026802

Date Analyzed: 09/05/2017

QC-Sample ID: 561296-018 S

Reporting Units: mg/L

Project ID: 92177354A

Date Prepared: 09/05/2017

Analyst: MCH

Batch #: 1

Matrix: Water

MATRIX / MATRIX SPIKE RECOVERY STUDY						
VOCs by SW-846 8260B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
cis-1,3-Dichloropropene	<0.000126	0.0500	0.0518	104	74-125	
trans-1,3-dichloropropene	<0.000198	0.0500	0.0562	112	66-125	
Ethylbenzene	<0.000190	0.0500	0.0498	100	75-125	
Hexachlorobutadiene	<0.00200	0.0500	0.0521	104	75-125	
isopropylbenzene	<0.000218	0.0500	0.0486	97	75-125	
Methylene Chloride	<0.00200	0.0500	0.0511	102	75-125	
MTBE	0.000810	0.0500	0.0542	107	65-135	
Naphthalene	<0.00200	0.0500	0.0733	147	70-130	X
n-Propylbenzene	<0.000173	0.0500	0.0505	101	75-125	
Styrene	<0.000197	0.0500	0.0503	101	75-125	
1,1,1,2-Tetrachloroethane	<0.000195	0.0500	0.0492	98	72-125	
1,1,2,2-Tetrachloroethane	<0.000365	0.0500	0.0534	107	74-125	
Tetrachloroethylene	<0.000347	0.0500	0.0504	101	71-125	
Toluene	<0.000500	0.0500	0.0495	99	59-139	
1,2,3-Trichlorobenzene	<0.00200	0.0500	0.0635	127	75-137	
1,2,4-Trichlorobenzene	<0.00200	0.0500	0.0578	116	75-135	
1,1,1-Trichloroethane	<0.000130	0.0500	0.0507	101	75-125	
1,1,2-Trichloroethane	<0.000272	0.0500	0.0535	107	75-127	
Trichloroethene	<0.000218	0.0500	0.0477	95	62-137	
Trichlorofluoromethane	<0.000191	0.0500	0.0485	97	60-140	
1,2,3-Trichloropropane	<0.000214	0.0500	0.0557	111	75-125	
1,2,4-Trimethylbenzene	<0.000113	0.0500	0.0486	97	75-125	
1,3,5-Trimethylbenzene	<0.000178	0.0500	0.0499	100	70-125	
o-Xylene	<0.000500	0.0500	0.0501	100	75-125	
m,p-Xylenes	<0.00100	0.100	0.0997	100	75-125	
Vinyl Chloride	<0.000232	0.0500	0.0441	88	60-140	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Relative Percent Difference [E] = 200*(C-A)/(C+B)

All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS Recoveries

Project Name: 0.43 Acres of Land



Work Order #: 561295

Lab Batch #: 3026826

Date Analyzed: 09/05/2017

QC-Sample ID: 561234-004 S

Reporting Units: mg/L

Project ID: 92177354A

Date Prepared: 09/05/2017

Analyst: SAD

Batch #: 1

Matrix: Water

MATRIX / MATRIX SPIKE RECOVERY STUDY						
VOCs by SW-846 8260B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Benzene	0.00109	0.0500	0.0456	89	66-142	
Bromobenzene	<0.000258	0.0500	0.0447	89	75-125	
Bromochloromethane	<0.000328	0.0500	0.0445	89	60-140	
Bromodichloromethane	<0.000164	0.0500	0.0494	99	75-125	
Bromoform	<0.000348	0.0500	0.0450	90	75-125	
Bromomethane	<0.000127	0.0500	0.0443	89	60-140	
n-Butylbenzene	<0.00200	0.0500	0.0467	93	75-125	
Sec-Butylbenzene	0.000330	0.0500	0.0453	90	75-125	
tert-Butylbenzene	<0.000177	0.0500	0.0450	90	75-125	
Carbon Tetrachloride	<0.000243	0.0500	0.0503	101	62-125	
Chlorobenzene	<0.000110	0.0500	0.0437	87	60-133	
Chloroethane	0.00263	0.0500	0.0463	87	60-140	
Chloroform	<0.000107	0.0500	0.0456	91	70-130	
Chloromethane	<0.00500	0.0500	0.0434	87	60-140	
2-Chlorotoluene	<0.000293	0.0500	0.0445	89	73-125	
4-Chlorotoluene	<0.000114	0.0500	0.0446	89	74-125	
p-Cymene (p-Isopropyltoluene)	<0.000150	0.0500	0.0415	83	75-125	
Dibromochloromethane	<0.000212	0.0500	0.0483	97	73-125	
1,2-Dibromo-3-Chloropropane	<0.000707	0.0500	0.0512	102	59-125	
1,2-Dibromoethane	<0.000380	0.0500	0.0453	91	73-125	
Dibromomethane	<0.000186	0.0500	0.0470	94	69-127	
1,2-Dichlorobenzene	<0.000175	0.0500	0.0452	90	75-125	
1,3-Dichlorobenzene	<0.000169	0.0500	0.0443	89	75-125	
1,4-Dichlorobenzene	<0.000222	0.0500	0.0440	88	75-125	
Dichlorodifluoromethane	<0.000148	0.0500	0.0559	112	70-130	
1,1-Dichloroethane	1.37	0.0500	1.32	0	72-125	X
1,2-Dichloroethane	0.0339	0.0500	0.0780	88	68-127	
1,1-Dichloroethene	0.218	0.0500	0.261	86	59-172	
cis-1,2-Dichloroethene	1.87	0.0500	1.84	0	75-125	X
trans-1,2-dichloroethene	0.00544	0.0500	0.0524	94	75-125	
1,2-Dichloropropane	<0.000170	0.0500	0.0454	91	74-125	
1,3-Dichloropropane	<0.000199	0.0500	0.0434	87	75-125	
2,2-Dichloropropane	<0.000154	0.0500	0.0461	92	60-125	
1,1-Dichloropropene	<0.000257	0.0500	0.0480	96	75-125	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Relative Percent Difference [E] = 200*(C-A)/(C+B)

All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS Recoveries

Project Name: 0.43 Acres of Land



Work Order #: 561295

Lab Batch #: 3026826

Date Analyzed: 09/05/2017

QC-Sample ID: 561234-004 S

Reporting Units: mg/L

Project ID: 92177354A

Date Prepared: 09/05/2017

Analyst: SAD

Batch #: 1

Matrix: Water

MATRIX / MATRIX SPIKE RECOVERY STUDY						
VOCs by SW-846 8260B	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
cis-1,3-Dichloropropene	<0.000126	0.0500	0.0505	101	74-125	
trans-1,3-dichloropropene	<0.000198	0.0500	0.0507	101	66-125	
Ethylbenzene	<0.000190	0.0500	0.0446	89	75-125	
Hexachlorobutadiene	<0.00200	0.0500	0.0635	127	75-125	X
isopropylbenzene	<0.000218	0.0500	0.0437	87	75-125	
Methylene Chloride	<0.00200	0.0500	0.0467	93	75-125	
MTBE	0.00209	0.0500	0.0496	95	65-135	
Naphthalene	<0.00200	0.0500	0.0664	133	70-130	X
n-Propylbenzene	<0.000173	0.0500	0.0446	89	75-125	
Styrene	<0.000197	0.0500	0.0460	92	75-125	
1,1,1,2-Tetrachloroethane	<0.000195	0.0500	0.0435	87	72-125	
1,1,2,2-Tetrachloroethane	<0.000365	0.0500	0.0447	89	74-125	
Tetrachloroethylene	<0.000347	0.0500	0.0449	90	71-125	
Toluene	<0.000500	0.0500	0.0434	87	59-139	
1,2,3-Trichlorobenzene	<0.00200	0.0500	0.0562	112	75-137	
1,2,4-Trichlorobenzene	<0.00200	0.0500	0.0578	116	75-135	
1,1,1-Trichloroethane	0.0962	0.0500	0.141	90	75-125	
1,1,2-Trichloroethane	0.00528	0.0500	0.0490	87	75-127	
Trichloroethene	0.000940	0.0500	0.0480	94	62-137	
Trichlorofluoromethane	<0.000191	0.0500	0.0506	101	60-140	
1,2,3-Trichloropropane	<0.000214	0.0500	0.0467	93	75-125	
1,2,4-Trimethylbenzene	<0.000113	0.0500	0.0430	86	75-125	
1,3,5-Trimethylbenzene	<0.000178	0.0500	0.0459	92	70-125	
o-Xylene	<0.000500	0.0500	0.0449	90	75-125	
m,p-Xylenes	<0.00100	0.100	0.0886	89	75-125	
Vinyl Chloride	0.0562	0.0500	0.103	94	60-140	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Relative Percent Difference [E] = 200*(C-A)/(C+B)

All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: 0.43 Acres of Land

Work Order # : 561295

Project ID: 92177354A

Lab Batch ID: 3026783

QC-Sample ID: 561312-023 S

Batch #: 1 **Matrix:** Soil

Date Analyzed: 09/06/2017

Date Prepared: 09/05/2017

Analyst: WEW

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

PAHs by 8270C SIM Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Acenaphthene	<0.000832	0.0333	0.0328	98	0.0333	0.0325	98	1	55-124	25	
Acenaphthylene	<0.000832	0.0333	0.0301	90	0.0333	0.0302	91	0	53-125	25	
Anthracene	<0.000832	0.0333	0.0345	104	0.0333	0.0333	100	4	53-125	25	
Benzo(a)anthracene	<0.000832	0.0333	0.0304	91	0.0333	0.0298	89	2	47-125	25	
Benzo(a)pyrene	<0.000832	0.0333	0.0320	96	0.0333	0.0316	95	1	52-125	25	
Benzo(b)fluoranthene	<0.000832	0.0333	0.0323	97	0.0333	0.0330	99	2	45-125	25	
Benzo(g,h,i)perylene	<0.000832	0.0333	0.0314	94	0.0333	0.0310	93	1	48-126	25	
Benzo(k)fluoranthene	<0.000832	0.0333	0.0372	112	0.0333	0.0358	108	4	54-125	25	
Chrysene	<0.000832	0.0333	0.0342	103	0.0333	0.0339	102	1	55-125	25	
Dibenz(a,h)anthracene	<0.000832	0.0333	0.0318	95	0.0333	0.0312	94	2	41-125	25	
Dibenzofuran	<0.000832	0.0333	0.0321	96	0.0333	0.0316	95	2	51-120	30	
Fluoranthene	0.00141	0.0333	0.0354	102	0.0333	0.0348	100	2	54-125	25	
Fluorene	<0.000832	0.0333	0.0334	100	0.0333	0.0329	99	2	54-125	25	
Indeno(1,2,3-c,d)Pyrene	<0.000832	0.0333	0.0319	96	0.0333	0.0315	95	1	42-125	25	
Naphthalene	0.0805	0.0333	0.103	68	0.0333	0.140	179	30	54-124	25	XF
Phenanthrene	0.00367	0.0333	0.0364	98	0.0333	0.0357	96	2	53-123	25	
Pyrene	0.00141	0.0333	0.0346	100	0.0333	0.0341	98	1	53-125	25	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$
 Relative Percent Difference RPD = $200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery [G] = $100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Form 3 - MS / MSD Recoveries



Project Name: 0.43 Acres of Land

Work Order # : 561295

Project ID: 92177354A

Lab Batch ID: 3026305

QC- Sample ID: 561295-004 S

Batch #: 1 **Matrix:** Soil

Date Analyzed: 08/30/2017

Date Prepared: 08/30/2017

Analyst: ARL

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by Texas1005 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Range Hydrocarbons	35.3	1000	982	95	939	935	96	5	70-130	30	
C12-C28 Range Hydrocarbons	<1.62	1000	1130	113	939	1100	117	3	70-130	30	

Lab Batch ID: 3026360

QC- Sample ID: 561295-012 S

Batch #: 1 **Matrix:** Ground Water

Date Analyzed: 08/31/2017

Date Prepared: 08/25/2017

Analyst: ARL

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by Texas1005 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Range Hydrocarbons	64.3	104	131	64	94.5	118	57	10	70-130	25	X
C12-C28 Range Hydrocarbons	<0.171	104	107	103	94.5	106	112	1	70-130	25	

Matrix Spike Percent Recovery [D] = $100*(C-A)/B$
Relative Percent Difference RPD = $200*(|C-F|/(C+F)|$

Matrix Spike Duplicate Percent Recovery [G] = $100*(F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Form 3 - MS / MSD Recoveries



Project Name: 0.43 Acres of Land

Work Order # : 561295

Project ID: 92177354A

Lab Batch ID: 3026557

QC-Sample ID: 561295-012 S

Batch #: 1 **Matrix:** Ground Water

Date Analyzed: 09/03/2017

Date Prepared: 09/02/2017

Analyst: SAD

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

VOAs by SW-846 8260 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	0.140	0.0500	0.0753	0	0.0500	0.137	0	58	66-142	25	XF
Bromobenzene	<0.000258	0.0500	0.0495	99	0.0500	0.0479	96	3	75-125	25	
Bromoform	<0.000328	0.0500	0.0472	94	0.0500	0.0456	91	3	60-140	25	
Bromochloromethane	<0.000164	0.0500	0.0568	114	0.0500	0.0554	111	2	75-125	25	
Bromodichloromethane	<0.000348	0.0500	0.0546	109	0.0500	0.0497	99	9	75-125	25	
Bromomethane	<0.000127	0.0500	0.0535	107	0.0500	0.0502	100	6	60-140	25	
n-Butylbenzene	0.0486	0.0500	0.0619	27	0.0500	0.0691	41	11	75-125	25	X
Sec-Butylbenzene	0.0307	0.0500	0.0563	51	0.0500	0.0610	61	8	75-125	25	X
tert-Butylbenzene	<0.000177	0.0500	0.0475	95	0.0500	0.0423	85	12	75-125	25	
Chlorobenzene	<0.000243	0.0500	0.0521	104	0.0500	0.0456	91	13	62-125	25	
Chloroethane	<0.000110	0.0500	0.0460	92	0.0500	0.0445	89	3	60-133	25	
Chloroform	<0.000190	0.0500	0.0528	106	0.0500	0.0521	104	1	60-140	25	
Chloromethane	<0.000107	0.0500	0.0520	104	0.0500	0.0520	104	0	70-130	25	
Chlorotoluene	<0.000500	0.0500	0.0445	89	0.0500	0.0434	87	3	60-140	25	
2-Chlorotoluene	<0.000293	0.0500	0.0483	97	0.0500	0.0445	89	8	73-125	25	
4-Chlorotoluene	<0.000114	0.0500	0.0487	97	0.0500	0.0462	92	5	74-125	25	
p-Cymene (p-Isopropyltoluene)	0.0148	0.0500	0.0509	72	0.0500	0.0519	74	2	75-125	25	X
Dibromochloromethane	<0.000212	0.0500	0.0468	94	0.0500	0.0453	91	3	73-125	25	
1,2-Dibromo-3-Chloropropane	<0.000707	0.0500	0.0512	102	0.0500	0.0477	95	7	59-125	25	
1,2-Dibromoethane	<0.000380	0.0500	0.0460	92	0.0500	0.0456	91	1	73-125	25	
Dibromomethane	<0.000186	0.0500	0.0495	99	0.0500	0.0487	97	2	69-127	25	
1,2-Dichlorobenzene	<0.000175	0.0500	0.0489	98	0.0500	0.0470	94	4	75-125	25	
1,3-Dichlorobenzene	<0.000169	0.0500	0.0488	98	0.0500	0.0461	92	6	75-125	25	

Matrix Spike Percent Recovery [D] = $100*(C-A)/B$

Relative Percent Difference RPD = $200*(C-F)/(C+F)$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Matrix Spike Duplicate Percent Recovery [G] = $100*(F-A)/E$



Form 3 - MS / MSD Recoveries



Project Name: 0.43 Acres of Land

Work Order # : 561295

Lab Batch ID: 3026557

Date Analyzed: 09/03/2017

Project ID: 92177354A

QC-Sample ID: 561295-012 S

Batch #: 1 **Matrix:** Ground Water

Date Prepared: 09/02/2017

Analyst: SAD

Reporting Units: mg/L VOAs by SW-846 8260	Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
1,4-Dichlorobenzene		<0.000222	0.0500	0.0475	95	0.0500	0.0440	88	8	75-125	25	
Dichlorodifluoromethane		<0.000148	0.0500	0.0464	93	0.0500	0.0406	81	13	70-130	25	
1,1-Dichloroethane		<0.000182	0.0500	0.0485	97	0.0500	0.0459	92	6	72-125	25	
1,2-Dichloroethane		<0.000283	0.0500	0.0482	96	0.0500	0.0438	88	10	68-127	25	
1,1-Dichloroethene		<0.000178	0.0500	0.0485	97	0.0500	0.0445	89	9	59-172	25	
cis-1,2-Dichloroethene		<0.000162	0.0500	0.0490	98	0.0500	0.0462	92	6	75-125	25	
trans-1,2-dichloroethene		<0.000167	0.0500	0.0473	95	0.0500	0.0439	88	7	75-125	25	
1,2-Dichloropropane		<0.000170	0.0500	0.0486	97	0.0500	0.0482	96	1	74-125	25	
1,3-Dichloropropane		<0.000199	0.0500	0.0456	91	0.0500	0.0455	91	0	75-125	25	
2,2-Dichloropropane		<0.000154	0.0500	0.0484	97	0.0500	0.0432	86	11	60-125	25	
1,1-Dichloropropene		<0.000257	0.0500	0.0505	101	0.0500	0.0470	94	7	75-125	25	
cis-1,3-Dichloropropene		<0.000126	0.0500	0.0519	104	0.0500	0.0508	102	2	74-125	25	
trans-1,3-dichloropropene		<0.000198	0.0500	0.0488	98	0.0500	0.0480	96	2	66-125	25	
Ethylbenzene		1.44	0.0500	0.387	0	0.0500	0.887	0	78	75-125	25	XF
Hexachlorobutadiene		<0.00200	0.0500	0.0555	111	0.0500	0.0607	121	9	75-125	25	
isopropylbenzene		0.111	0.0500	0.0705	0	0.0500	0.105	0	39	75-125	25	XF
Methylene Chloride		<0.00200	0.0500	0.0494	99	0.0500	0.0665	133	30	75-125	25	XF
MTBE		0.390	0.0500	0.140	0	0.0500	0.236	0	51	65-135	25	XF
Naphthalene		0.728	0.0500	0.253	0	0.0500	0.774	92	101	70-130	25	XF
n-Propylbenzene		0.447	0.0500	0.145	0	0.0500	0.299	0	69	75-125	25	XF
Styrene		<0.000197	0.0500	0.0559	112	0.0500	0.0666	133	17	75-125	25	X
1,1,1,2-Tetrachloroethane		<0.000195	0.0500	0.0430	86	0.0500	0.0385	77	11	72-125	25	
1,1,2,2-Tetrachloroethane		<0.000365	0.0500	0.0499	100	0.0500	0.0521	104	4	74-125	25	
Tetrachloroethylene		<0.000347	0.0500	0.0459	92	0.0500	0.0429	86	7	71-125	25	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$
 Relative Percent Difference RPD = $200 \times |(C-F)/(C+F)|$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Matrix Spike Duplicate Percent Recovery [G] = $100 \times (F-A)/E$



Form 3 - MS / MSD Recoveries



Project Name: 0.43 Acres of Land

Work Order #: 561295

Lab Batch ID: 3026557

Date Analyzed: 09/03/2017

Project ID: 92177354A

QC-Sample ID: 561295-012 S

Batch #: 1 Matrix: Ground Water

Date Prepared: 09/02/2017

Analyst: SAD

Reporting Units: VOAs by SW-846 8260	Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Toluene		0.155	0.0500	0.0922	0	0.0500	0.177	44	63	59-139	25	XF
1,2,3-Trichlorobenzene		<0.00200	0.0500	0.0520	104	0.0500	0.0697	139	29	75-137	25	XF
1,2,4-Trichlorobenzene		<0.00200	0.0500	0.0450	90	0.0500	0.0535	107	17	75-135	25	
1,1,1-Trichloroethane		<0.000130	0.0500	0.0489	98	0.0500	0.0434	87	12	75-125	25	
1,1,2-Trichloroethane		<0.000272	0.0500	0.0461	92	0.0500	0.0463	93	0	75-127	25	
Trichloroethene		<0.000218	0.0500	0.0512	102	0.0500	0.0530	106	3	62-137	25	
Trichlorofluoromethane		<0.000191	0.0500	0.0522	104	0.0500	0.0452	90	14	60-140	25	
1,2,3-Trichloropropane		<0.000214	0.0500	0.0546	109	0.0500	0.0558	112	2	75-125	25	
1,2,4-Trimethylbenzene		2.91	0.0500	0.695	0	0.0500	1.49	0	73	75-125	25	XF
1,3,5-Trimethylbenzene		0.870	0.0500	0.231	0	0.0500	0.515	0	76	70-125	25	XF
o-Xylene		1.32	0.0500	0.474	0	0.0500	0.988	0	70	75-125	25	XF
m,p-Xylenes		5.59	0.100	1.44	0	0.100	2.98	0	70	75-125	25	XF
Vinyl Chloride		<0.000232	0.0500	0.0474	95	0.0500	0.0452	90	5	60-140	25	

Matrix Spike Percent Recovery [D] = $100*(C-A)/B$
Relative Percent Difference RPD = $200*(|C-F|/(C+F)|$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Form 3 - MS / MSD Recoveries



Project Name: 0.43 Acres of Land

Work Order # : 561295

Project ID: 92177354A

Lab Batch ID: 3026581

QC-Sample ID: 561295-004 S

Batch #: 1 **Matrix:** Soil

Date Analyzed: 09/03/2017

Date Prepared: 09/03/2017

Analyst: MCH

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

VOAs by SW-846 8260 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	0.0922	1.21	1.25	96	1.21	1.23	94	2	66-142	25	
Bromobenzene	<0.0106	1.21	1.18	98	1.21	1.20	99	2	75-125	25	
Bromo-chloromethane	<0.0115	1.21	1.15	95	1.21	1.13	93	2	60-140	25	
Bromo-dichloromethane	<0.00642	1.21	1.03	85	1.21	1.07	88	4	75-125	25	
Bromoform	<0.0169	1.21	0.920	76	1.21	0.906	75	2	75-125	25	
Bromomethane	<0.0256	1.21	0.0602	5	1.21	0.0535	4	12	60-140	25	X
tert-Butylbenzene	<0.00499	1.21	1.29	107	1.21	1.26	104	2	75-125	25	
Sec-Butylbenzene	0.101	1.21	1.35	103	1.21	1.33	102	1	75-125	25	
n-Butylbenzene	0.370	1.21	1.64	105	1.21	1.59	101	3	75-125	25	
Carbon Tetrachloride	<0.00565	1.21	1.10	91	1.21	1.05	87	5	62-125	25	
Chlorobenzene	<0.00579	1.21	1.21	100	1.21	1.20	99	1	60-133	25	
Chloroethane	<0.0133	1.21	0.579	48	1.21	0.511	42	12	60-140	25	X
Chloroform	<0.00708	1.21	1.16	96	1.21	1.11	92	4	74-125	25	
Chloromethane	<0.00722	1.21	0.922	76	1.21	0.859	71	7	60-140	25	
2-Chlorotoluene	<0.00950	1.21	1.24	102	1.21	1.24	102	0	73-125	25	
4-Chlorotoluene	<0.0106	1.21	1.22	101	1.21	1.23	102	1	74-125	25	
p-Cymene (p-Isopropyltoluene)	<0.0102	1.21	1.11	92	1.21	1.06	88	5	75-125	25	
1,2-Dibromo-3-Chloropropane	<0.0375	1.21	1.21	100	1.21	1.15	95	5	59-125	25	
Dibromo-chloromethane	<0.0114	1.21	0.947	78	1.21	0.971	80	3	73-125	25	
1,2-Dibromoethane	<0.0102	1.21	1.27	105	1.21	1.24	102	2	73-125	25	
Dibromomethane	<0.00852	1.21	1.14	94	1.21	1.09	90	4	69-127	25	
1,2-Dichlorobenzene	<0.0104	1.21	1.24	102	1.21	1.17	97	6	75-125	25	
1,3-Dichlorobenzene	<0.00899	1.21	1.21	100	1.21	1.18	98	3	75-125	25	

Matrix Spike Percent Recovery [D] = $100*(C-A)/B$

Relative Percent Difference RPD = $200*(|C-F|/(C+F))$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Matrix Spike Duplicate Percent Recovery [G] = $100*(F-A)/E$



Form 3 - MS / MSD Recoveries



Project Name: 0.43 Acres of Land

Work Order #: 561295

Lab Batch ID: 3026581

Date Analyzed: 09/03/2017

Project ID: 92177354A

QC-Sample ID: 561295-004 S

Batch #: 1 Matrix: Soil

Date Prepared: 09/03/2017

Analyst: MCH

Reporting Units: VOAs by SW-846 8260	Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
1,4-Dichlorobenzene	<0.00575	1.21	1.20	99	1.21	1.20	99	0	75-125	25		
Dichlorodifluoromethane	<0.0103	1.21	1.01	83	1.21	1.03	85	2	65-135	25		
1,2-Dichloroethane	<0.00849	1.21	1.13	93	1.21	1.11	92	2	68-127	25		
1,1-Dichloroethane	<0.00487	1.21	1.16	96	1.21	1.08	89	7	72-125	25		
trans-1,2-dichloroethene	<0.00708	1.21	1.18	98	1.21	1.15	95	3	75-125	25		
cis-1,2-Dichloroethene	<0.00823	1.21	1.16	96	1.21	1.12	93	4	75-125	25		
1,1-Dichloroethene	<0.00574	1.21	1.15	95	1.21	1.12	93	3	59-172	25		
2,2-Dichloropropane	<0.0286	1.21	1.04	86	1.21	1.04	86	0	75-125	25		
1,3-Dichloropropane	<0.00605	1.21	1.19	98	1.21	1.18	98	1	75-125	25		
1,2-Dichloropropane	<0.0114	1.21	1.20	99	1.21	1.15	95	4	74-125	25		
trans-1,3-dichloropropene	<0.00734	1.21	1.07	88	1.21	1.08	89	1	66-125	25		
1,1-Dichloropropene	<0.0102	1.21	1.18	98	1.21	1.17	97	1	75-125	25		
cis-1,3-Dichloropropene	<0.0103	1.21	1.09	90	1.21	1.10	91	1	74-125	25		
Ethylbenzene	0.142	1.21	1.37	101	1.21	1.37	101	0	75-125	25		
Hexachlorobutadiene	<0.0484	1.21	1.29	107	1.21	1.23	102	5	75-125	25		
isopropylbenzene	0.160	1.21	1.24	89	1.21	1.22	88	2	75-125	25		
Methylene Chloride	<0.121	1.21	1.16	96	1.21	1.07	88	8	71-132	25		
MTBE	1.26	1.21	2.56	107	1.21	2.47	100	4	60-140	25		
Naphthalene	0.316	1.21	1.66	111	1.21	1.64	109	1	70-130	25		
n-Propylbenzene	0.620	1.21	1.89	105	1.21	1.88	104	1	75-125	25		
Styrene	<0.00363	1.21	1.08	89	1.21	1.07	88	1	75-125	25		
1,1,1,2-Tetrachloroethane	<0.00985	1.21	1.04	86	1.21	1.04	86	0	72-125	25		
1,1,2,2-Tetrachloroethane	<0.0111	1.21	1.17	97	1.21	1.14	94	3	74-125	25		
Tetrachloroethylene	<0.00619	1.21	1.12	93	1.21	1.13	93	1	71-125	25		

Matrix Spike Percent Recovery [D] = $100*(C-A)/B$

Relative Percent Difference RPD = $200*|(C-F)/(C+F)|$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Form 3 - MS / MSD Recoveries



Project Name: 0.43 Acres of Land

Work Order #: 561295

Project ID: 92177354A

Lab Batch ID: 3026581

QC-Sample ID: 561295-004 S

Batch #: 1 Matrix: Soil

Date Analyzed: 09/03/2017

Date Prepared: 09/03/2017

Analyst: MCH

Reporting Units: mg/kg VOAs by SW-846 8260	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Toluene	<0.0242	1.21	1.18	98	1.21	1.21	100	3	59-139	25	
1,2,3-Trichlorobenzene	<0.0484	1.21	1.50	124	1.21	1.43	118	5	75-137	25	
1,2,4-Trichlorobenzene	<0.0484	1.21	1.52	126	1.21	1.46	121	4	75-135	25	
1,1,2-Trichloroethane	<0.00788	1.21	1.30	107	1.21	1.30	107	0	75-127	25	
1,1,1-Trichloroethane	<0.00820	1.21	1.15	95	1.21	1.10	91	4	75-125	25	
Trichloroethene	<0.00791	1.21	1.17	97	1.21	1.18	98	1	62-137	25	
Trichlorofluoromethane	<0.0117	1.21	1.97	163	1.21	1.57	130	23	67-125	25	X
1,2,3-Trichloropropane	<0.0170	1.21	1.20	99	1.21	1.25	103	4	75-125	25	
1,2,4-Trimethylbenzene	0.207	1.21	1.47	104	1.21	1.43	101	3	75-125	25	
1,3,5-Trimethylbenzene	0.0477	1.21	1.31	104	1.21	1.28	102	2	70-130	25	
Vinyl Chloride	<0.0200	1.21	0.907	75	1.21	0.847	70	7	60-140	25	
o-Xylene	<0.0121	1.21	1.21	100	1.21	1.20	99	1	75-125	25	
m,p-Xylenes	0.101	2.42	2.56	102	2.42	2.53	100	1	75-125	25	

Matrix Spike Percent Recovery [D] = $100*(C-A)/B$
Relative Percent Difference RPD = $200*(|C-F|/(C+F)|$

Matrix Spike Duplicate Percent Recovery [G] = $100*(F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Project Name: 0.43 Acres of Land

Work Order #: 561295

Lab Batch #: 3026271

Date Analyzed: 08/31/2017 10:40

QC- Sample ID: 560970-049 D

Reporting Units: %

Project ID: 92177354A

Analyst: MJP

Batch #: 1

Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	15.2	16.0	5	20	

Lab Batch #: 3026271

Date Analyzed: 08/31/2017 10:40

QC- Sample ID: 561013-002 D

Reporting Units: %

Date Prepared: 08/31/2017

Analyst: MJP

Batch #: 1

Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	19.0	18.8	1	20	

Lab Batch #: 3026275

Date Analyzed: 08/31/2017 11:08

QC- Sample ID: 561202-001 D

Reporting Units: %

Date Prepared: 08/31/2017

Analyst: MJP

Batch #: 1

Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	22.8	23.1	1	20	

Lab Batch #: 3026275

Date Analyzed: 08/31/2017 11:08

QC- Sample ID: 561295-006 D

Reporting Units: %

Date Prepared: 08/31/2017

Analyst: MJP

Batch #: 1

Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	13.6	13.8	1	20	

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$
 All Results are based on MDL and validated for QC purposes.
 BRL - Below Reporting Limit

Attachment A Laboratory Data Package Cover Page

Project Name: **0.43 Acres of Land** Laboratory Number: **561295**
This Data package consists of : Laboratory Batch No(s) **730324, 3026271, 730433, 730444, 730099,**
This signature page, the laboratory review checklist, and the following reportable data:

R1 Field chain-of-custody documentation;

R2 Sample identification cross-reference;

R3 Test reports (analytical data sheets) for each environmental sample that includes:
a) Items consistent with NELAC 5
b) dilution factors,
c) preparation methods,
d) cleanup methods, and
e) if required for the project, tentatively identified compounds (TICs).

R4 Surrogate Recovery data including:
a) Calculated recovery (%R), and
b) The laboratory's surrogate QC limits.

R5 Test reports/summary forms for blank samples;

R6 Test reports/summary forms for laboratory control samples (LCSS) including:
a) LCS spiking amounts,
b) Calculated %R for each analyte, and
c) The laboratory's LCS QC limits.

R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
a) Samples associated with the MS/MSD clearly identified,
b) MS/MSD spiking amounts,
c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
d) Calculated %Rs and relative percent differences (RPDs) and
e) The laboratory's MS/MSD QC limits

R8 Laboratory analytical duplicate (if applicable) recovery and precision:
a) the amount of analyte measured in the duplicate,
b) the calculated RPD, and
c) the laboratory's QC limits for analytical duplicates.

R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix;

R10 Other problems or anomalies.

Exception Report for every "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies, observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Check, if applicable: [] This laboratory meets an exception under 30 TAC 25.6 and was last inspection by [] TCEQ or [] _____ on (enter date of last inspection). Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Debbie Simmons

Name (Printed)

Debbie Simmons

Signature

Project Manager

Official Title (printed)

08-SEP-17

Date

Attachment A (cont'd) : Laboratory Review Checklist: Reportable Data

Laboratory Name: XENCO LABORATORIES		LRC Date : 08-SEP-17				
Project Name: 0.43 Acres of Land		Laboratory Job Number : 561295				
Reviewer Name: DES		Batch Number(s) : 730324, 3026271, 730433, 730444, 730099, 3026275, 730534, 730314, 730301, 730356, 729947				
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴ ER# ⁵
R1	OI	Chain-of-Custody (COC)				
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X			
		Were all departures from standard conditions described in an exception report?		X		
R2	OI	Sample and Quality Control (QC) Identification				
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X			
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X			
R3	OI	Test Reports				
		Were all samples prepared and analyzed within holding times?		X		1
		Other than those results <MQL, were all other raw values bracketed by calibration standards?	X			
		Were calculations checked by a peer or supervisor?	X			
		Were all analyte identifications checked by a peer or supervisor?	X			
		Were sample detection limits reported for all analytes not detected?	X			
		Were all results for soil and sediment samples reported on a dry weight basis?	X			
		Were % moisture (or solids) reported for all soil and sediment samples?	X			
		Were bulk soil/solid samples for volatile analysis extracted with methanol per SW846 Method 5035?	X			
		If required for the project, were TICs reported?			X	
R4	O	Surrogate Recovery Data				
		Were surrogates added prior to extraction?	X			
		Were surrogate percent recoveries in all samples within the laboratory QC limits?		X		2
R5	OI	Test Reports/Summary Forms for Blank Samples				
		Were appropriate type(s) of blanks analyzed?	X			
		Were blanks analyzed at the appropriate frequency ?	X			
		Were method blanks taken through the entire analytical procedure, including preparation and, if applicable, cleanup procedures ?	X			
		Were Blank Concentrations <MQL?	X			
R6	OI	Laboratory Control Samples (LCS):				
		Were all COCs included in the LCS?	X			
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X			
		Were LCSs analyzed at the required frequency?	X			
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X			
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X			
		Was the LCSD RPD within the QC limits?	X			
R7	OI	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) data				
		Were the project/method specified analytes included in the MS and MSD?	X			
		Were MS/MSD analyzed at the appropriate frequency?	X			
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X		3
		Were MS/MSD RPDs within the laboratory QC limits?		X		4
R8	OI	Analytical Duplicate Data				
		Were appropriate analytical duplicates analyzed for each matrix?	X			
		Were analytical duplicates analyzed at the appropriate frequency?	X			
		Were RPDs or relative standard deviations within the laboratory QC limits?	X			
R9	OI	Method Quantitation Limits (MQLs)				
		Are the MQLs for each method analyte included in the laboratory data package?	X			
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X			
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X			
R10	OI	Other Problems/Anomalies				
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X			
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X			
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X			

Attachment A (cont'd) : Laboratory Review Checklist: Reportable Data

Laboratory Name: XENCO LABORATORIES		LRC Date : 08-SEP-17				
Project Name: 0.43 Acres of Land		Laboratory Job Number : 561295				
Reviewer Name: DES		Batch Number(s) : 730324, 3026271, 730433, 730444, 730099, 3026275, 730534, 730314, 730301, 730356, 729947				
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴
S1	OI	Initial Calibration (ICAL)				ER# ⁵
		Were response factors and/or relative response factors for each analyte within QC limits?	X			
		Were percent RSDs or correlation coefficient criteria met?	X			
		Was the number of standards recommended in the method used for all analytes?	X			
		Were all points generated between the lowest and the highest standard used to calculate the curve?	X			
		Are ICAL data available for all instruments used?	X			
		Has the initial calibration curve been verified using an appropriate second source standard?	X			
S2	OI	Initial and Continuing Calibration Verification (ICCV and CCV) and continuing calibration blank				
		Was the CCV analyzed at the method-required frequency?	X			
		Were percent differences for each analyte within the method-required QC limits?	X			
		Was the ICAL curve verified for each analyte?	X			
		Was the absolute value of the analyte concentration in the inorganic CCB <MDL?			X	
S3	O	Mass Spectral Tuning				
		Was the appropriate compound for the method used for tuning?	X			
		Were ion abundance data within the method-required QC limits?	X			
S4	O	Internal Standard (IS)				
		Were IS area counts and retention times within the method-required QC limits?	X			
S5	OI	Raw Data (NELAC 5.5.10)				
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X			
		Were data associated with manual integrations flagged on the raw data?	X			
S6	O	Dual Column Confirmation				
		Did dual column confirmation results meet the method-required QC?			X	
S7	O	Tentatively Identified Compounds (TICs)				
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X	
S8	I	Interference Check Sample (ICS) Results				
		Were percent recoveries within method QC limits?			X	
S9	I	Serial Dilutions, Post Digestions Spikes, and Method of Standard Additions				
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X	
S10	OI	Method Detection Limit (MDL) Studies				
		Was a MDL study performed for each reported analyte?	X			
		Is the MDL either adjusted or supported by the analysis of DCSs?	X			
S11	OI	Proficiency Test Reports				
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X			
S12	OI	Standards Documentation				
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X			
S13	OI	Compound/Analyte Identification Procedures				
		Are the procedures for compound/analyte identification documented?	X			
S14	OI	Demonstration of Analyst Competency (DOC)				
		Was DOC conducted consistent with NELAC Chapter 5?	X			
		Is documentation of the analyst's competency up-to-date and on file?	X			
S15	OI	Verification/Validation Documentation for Methods (NELAC Chapter 5)				
		Are all methods used to generate the data documented, verified, and validated, where applicable?	X			
S16	OI	Laboratory Standard Operating Procedures (SOPs)				
		Are laboratory SOPs current and on file for each method performed?	X			

1. Items identified by the letter "R" must be included in the laboratory data package submitted to the TCEQ-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report Identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Attachment A (cont'd): Laboratory Review Checklist: Exception Reports

Laboratory Name:	XENCO LABORATORIES	LRC Date:	08-SEP-17
Project Name:	0.43 Acres of Land	Laboratory Job Number:	561295
Reviewer Name:	DES	Batch Number(s) :	730324, 3026271, 730433, 730444, 730099, 3026275, 730534, 730314, 730301, 730356, 729947
ER# ¹	DESCRIPTION		
1	SIM PAH water samples sent to Xenco Dallas and placed on hold. 561295-015 requested to be analyzed, but the hold time for extraction was exceeded due to lab error.		
2	SW8270C_SIM Batch 3026966, Surrogate 2-Fluorobiphenyl, Surrogate Nitrobenzene-d5, Surrogate Terphenyl-D14 recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis. Samples affected are: 561295-015.		
3	SW8260B Batch 3026557, Lab Sample ID 561295-012 was selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Naphthalene recovered below QC limits in the Matrix Spike. 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Benzene, Ethylbenzene, MTBE, Sec-Butylbenzene, Toluene, isopropylbenzene, m,p-Xylenes, n-Butylbenzene, n-Propylbenzene, o-Xylene, p-Cymene (p-Isopropyltoluene) recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. 1,2,3-Trichlorobenzene, Methylene Chloride, Styrene recovered above QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 561295-012. The Laboratory Control Sample for Methylene Chloride, Toluene, Benzene, MTBE, Naphthalene, m,p-Xylenes, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Sec-Butylbenzene, n-Butylbenzene, Ethylbenzene, o-Xylene, 1,2,3-Trichlorobenzene, Styrene, n-Propylbenzene, p-Cymene (p-Isopropyltoluene), isopropylbenzene is within laboratory Control Limits, therefore the data was accepted. SW8260B Batch 3026581, Lab Sample ID 561295-004 was selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Bromomethane, Chloroethane recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Trichlorofluoromethane recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 561295-003, -004, -005, -007, -009, -016. The Laboratory Control Sample for Bromomethane, Trichlorofluoromethane, Chloroethane is within laboratory Control Limits, therefore the data was accepted. TX1005 Batch 3026360, Lab Sample ID 561295-012 was selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). C6-C12 Range Hydrocarbons recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 561295-011, -012, -013, -014, -015, -017, -018. The Laboratory Control Sample for C6-C12 Range Hydrocarbons is within laboratory Control Limits, therefore the data was accepted. SW8260B Batch 3026678, Lab Sample ID 561295-008 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). 1,1,1,2-Tetrachloroethane, 1,1,2,2-Tetrachloroethane, 1,1-Dichloroethane, 1,2-Dichlorobenzene, 1,2-Dichloropropane, 1,3-Dichloropropane, Benzene, Bromobenzene, Bromodichloromethane, Bromoform, Bromomethane, Chloroform, Chloromethane, Dibromochloromethane, Methylene Chloride, Styrene, Vinyl Chloride, cis-1,3-Dichloropropene recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 561295-001, -002, -006, -008, -010. The Laboratory Control Sample for 1,1-Dichloroethane, 1,2-Dichloropropane, Bromodichloromethane, Bromomethane, Methylene Chloride, 1,3-Dichloropropane, Benzene, Bromobenzene, Chloroform, Chloromethane, cis-1,3-Dichloropropene, 1,1,2,2-Tetrachloroethane, 1,1,1,2-Tetrachloroethane, 1,2-Dichlorobenzene, Dibromochloromethane, Styrene, Bromoform, Vinyl Chloride is within laboratory Control Limits, therefore the data was accepted.		
4	SW8260B Batch 3026557, 1,2,3-Trichlorobenzene, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Benzene, Ethylbenzene, MTBE, Methylene Chloride, Naphthalene, Toluene, isopropylbenzene, m,p-Xylenes, n-Propylbenzene, o-Xylene Relative Percent Difference (RPD) between matrix spike and duplicate were above quality control limits. Samples in the analytical batch are: 561295-012		

1 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No is checked on the LRC).

Terracon Houston, Houston, TX

0.43 Acres of Land

Analytical Method: PAHs by 8270C SIM

Matrix: Soil

Parameter	Spike Amount	Actual Amount	Units
Acenaphthene	0.000833	0.000787	mg/kg
Acenaphthylene	0.000833	0.000753	mg/kg
Anthracene	0.000833	0.000705	mg/kg
Benzo(a)anthracene	0.000833	0.000759	mg/kg
Benzo(a)pyrene	0.000833	0.000450	mg/kg
Benzo(b)fluoranthene	0.000833	0.000921	mg/kg
Benzo(g,h,i)perylene	0.000833	0.00111	mg/kg
Benzo(k)fluoranthene	0.000833	0.00163	mg/kg
Chrysene	0.000833	0.00105	mg/kg
Dibenz(a,h)anthracene	0.000833	0.00118	mg/kg
Dibenzofuran	0.000833	0.000802	mg/kg
Fluoranthene	0.000833	0.000892	mg/kg
Fluorene	0.000833	0.000773	mg/kg
Indeno(1,2,3-c,d)Pyrene	0.000833	0.00103	mg/kg
Naphthalene	0.000833	0.000891	mg/kg
Phenanthrene	0.000833	0.000755	mg/kg
Pyrene	0.000833	0.000778	mg/kg

Analytical Method: PAHs by 8270C SIM

Matrix: Water

Parameter	Spike Amount	Actual Amount	Units
Acenaphthene	0.0000250	0.0000220	mg/L
Acenaphthylene	0.0000250	0.0000220	mg/L
Anthracene	0.0000250	0.0000230	mg/L
Benzo(a)anthracene	0.0000250	0.0000310	mg/L
Benzo(a)pyrene	0.0000250	0.0000190	mg/L
Benzo(b)fluoranthene	0.0000250	0.0000200	mg/L
Benzo(g,h,i)perylene	0.0000250	0.0000240	mg/L
Benzo(k)fluoranthene	0.0000250	0.0000190	mg/L
Chrysene	0.0000250	0.0000220	mg/L
Dibenz(a,h)anthracene	0.0000250	0.0000210	mg/L
Dibenzofuran	0.0000250	0.0000230	mg/L
Fluoranthene	0.0000250	0.0000220	mg/L
Fluorene	0.0000250	0.0000230	mg/L
Indeno(1,2,3-c,d)Pyrene	0.0000250	0.0000210	mg/L
Naphthalene	0.0000250	0.0000340	mg/L
Phenanthrene	0.0000250	0.0000270	mg/L
Pyrene	0.0000250	0.0000230	mg/L

Analytical Method: TPH by Texas1005

Matrix: Soil

Parameter	Spike Amount	Actual Amount	Units
C6-C12 Range Hydrocarbons	25.0	25.0	mg/kg
C12-C28 Range Hydrocarbons	25.0	21.0	mg/kg

Terracon Houston, Houston, TX

0.43 Acres of Land

Analytical Method: TPH by Texas1005

Matrix: Water

Parameter	Spike Amount	Actual Amount	Units
C6-C12 Range Hydrocarbons	0.250	0.220	mg/L
C12-C28 Range Hydrocarbons	0.250	0.210	mg/L

Terracon Houston, Houston, TX

0.43 Acres of Land

Analytical Method: VOAs by SW-846 8260

Matrix: Soil

Parameter	Spike Amount	Actual Amount	Units
Benzene	0.00100	0.000270	mg/kg
Bromobenzene	0.000250	0.000180	mg/kg
Bromochloromethane	0.000500	0.000380	mg/kg
Bromodichloromethane	0.000250	0.000240	mg/kg
Bromoform	0.00100	0.000740	mg/kg
Bromomethane	0.000500	0.000280	mg/kg
tert-Butylbenzene	0.000250	0.000200	mg/kg
Sec-Butylbenzene	0.000250	0.000180	mg/kg
n-Butylbenzene	0.00200	0.00159	mg/kg
Carbon Tetrachloride	0.000250	0.000320	mg/kg
Chlorobenzene	0.000250	0.000330	mg/kg
Chloroethane	0.000500	0.000650	mg/kg
Chloroform	0.000250	0.000590	mg/kg
Chloromethane	0.00100	0.000230	mg/kg
2-Chlorotoluene	0.000250	0.000250	mg/kg
4-Chlorotoluene	0.000250	0.000250	mg/kg
p-Cymene (p-Isopropyltoluene)	0.000250	0.000250	mg/kg
1,2-Dibromo-3-Chloropropane	0.00200	0.00299	mg/kg
Dibromochloromethane	0.000500	0.000460	mg/kg
1,2-Dibromoethane	0.000500	0.000410	mg/kg
Dibromomethane	0.000500	0.000300	mg/kg
1,2-Dichlorobenzene	0.000250	0.000340	mg/kg
1,3-Dichlorobenzene	0.000250	0.000290	mg/kg
1,4-Dichlorobenzene	0.000250	0.000380	mg/kg
Dichlorodifluoromethane	0.000500	0.000690	mg/kg
1,2-Dichloroethane	0.000250	0.000160	mg/kg
1,1-Dichloroethane	0.000250	0.000340	mg/kg
trans-1,2-dichloroethene	0.000250	0.000220	mg/kg
cis-1,2-Dichloroethene	0.000250	0.000220	mg/kg
1,1-Dichloroethene	0.000250	0.000300	mg/kg
2,2-Dichloropropane	0.000250	0.000160	mg/kg
1,3-Dichloropropane	0.000250	0.000140	mg/kg
1,2-Dichloropropane	0.000250	0.000150	mg/kg
trans-1,3-dichloropropene	0.000500	0.000470	mg/kg
1,1-Dichloropropene	0.000250	0.000300	mg/kg
cis-1,3-Dichloropropene	0.000250	0.000180	mg/kg
Ethylbenzene	0.000250	0.000290	mg/kg
Hexachlorobutadiene	0.00200	0.00181	mg/kg
isopropylbenzene	0.000250	0.000250	mg/kg
Methylene Chloride	0.00500	0.00469	mg/kg
MTBE	0.00100	0.000870	mg/kg
Naphthalene	0.00200	0.00153	mg/kg
n-Propylbenzene	0.000250	0.000150	mg/kg
Styrene	0.000250	0.000270	mg/kg
1,1,1,2-Tetrachloroethane	0.000500	0.000510	mg/kg
1,1,2,2-Tetrachloroethane	0.000500	0.000420	mg/kg
Tetrachloroethylene	0.000250	0.000300	mg/kg
Toluene	0.00100	0.000900	mg/kg
1,2,3-Trichlorobenzene	0.00200	0.00174	mg/kg
1,2,4-Trichlorobenzene	0.00200	0.00164	mg/kg
1,1,2-Trichloroethane	0.000500	0.000490	mg/kg

Terracon Houston, Houston, TX

0.43 Acres of Land

Analytical Method: VOAs by SW-846 8260

Matrix: Soil

Parameter	Spike Amount	Actual Amount	Units
1,1,1-Trichloroethane	0.00200	0.000330	mg/kg
Trichloroethene	0.000250	0.000220	mg/kg
Trichlorofluoromethane	0.000250	0.000240	mg/kg
1,2,3-Trichloropropane	0.00100	0.000100	mg/kg
1,2,4-Trimethylbenzene	0.000250	0.000280	mg/kg
1,3,5-Trimethylbenzene	0.000250	0.000250	mg/kg
Vinyl Chloride	0.000250	0.000240	mg/kg
o-Xylene	0.000500	0.000370	mg/kg
m,p-Xylenes	0.00100	0.000830	mg/kg

Terracon Houston, Houston, TX

0.43 Acres of Land

Analytical Method: VOAs by SW-846 8260

Matrix: Water

Parameter	Spike Amount	Actual Amount	Units
Benzene	0.000250	0.000370	mg/L
Bromobenzene	0.000250	0.000370	mg/L
Bromochloromethane	0.000500	0.000440	mg/L
Bromodichloromethane	0.000250	0.000460	mg/L
Bromoform	0.00100	0.00124	mg/L
Bromomethane	0.000500	0.000570	mg/L
n-Butylbenzene	0.00200	0.00176	mg/L
Sec-Butylbenzene	0.000250	0.000230	mg/L
tert-Butylbenzene	0.000250	0.000210	mg/L
Carbon Tetrachloride	0.000250	0.000270	mg/L
Chlorobenzene	0.000250	0.000280	mg/L
Chloroethane	0.000500	0.000630	mg/L
Chloroform	0.000250	0.000600	mg/L
Chloromethane	0.00500	0.00576	mg/L
2-Chlorotoluene	0.000250	0.000210	mg/L
4-Chlorotoluene	0.000250	0.000260	mg/L
p-Cymene (p-Isopropyltoluene)	0.000250	0.000150	mg/L
Dibromochloromethane	0.000250	0.000440	mg/L
1,2-Dibromo-3-Chloropropane	0.00100	0.000800	mg/L
1,2-Dibromoethane	0.000500	0.000450	mg/L
Dibromomethane	0.000500	0.000460	mg/L
1,2-Dichlorobenzene	0.000250	0.000360	mg/L
1,3-Dichlorobenzene	0.000250	0.000370	mg/L
1,4-Dichlorobenzene	0.000250	0.000430	mg/L
Dichlorodifluoromethane	0.000250	0.000310	mg/L
1,1-Dichloroethane	0.000250	0.000300	mg/L
1,2-Dichloroethane	0.000250	0.000260	mg/L
1,1-Dichloroethene	0.000250	0.000280	mg/L
cis-1,2-Dichloroethene	0.000250	0.000240	mg/L
trans-1,2-dichloroethene	0.000250	0.000200	mg/L
1,2-Dichloropropane	0.000250	0.000270	mg/L
1,3-Dichloropropane	0.000250	0.000240	mg/L
2,2-Dichloropropane	0.000250	0.000170	mg/L
1,1-Dichloropropene	0.000250	0.000290	mg/L
cis-1,3-Dichloropropene	0.000500	0.000390	mg/L
trans-1,3-dichloropropene	0.000500	0.000420	mg/L
Ethylbenzene	0.000250	0.000260	mg/L
Hexachlorobutadiene	0.00200	0.00197	mg/L
isopropylbenzene	0.000250	0.000240	mg/L
Methylene Chloride	0.00200	0.00206	mg/L
MTBE	0.000500	0.000750	mg/L
Naphthalene	0.00200	0.00145	mg/L
n-Propylbenzene	0.000250	0.000280	mg/L
Styrene	0.000250	0.000290	mg/L
1,1,1,2-Tetrachloroethane	0.000500	0.000540	mg/L
1,1,2,2-Tetrachloroethane	0.000500	0.000460	mg/L
Tetrachloroethylene	0.000500	0.000500	mg/L
Toluene	0.000500	0.000480	mg/L
1,2,3-Trichlorobenzene	0.00200	0.00174	mg/L
1,2,4-Trichlorobenzene	0.00200	0.00189	mg/L
1,1,1-Trichloroethane	0.000250	0.000200	mg/L

Terracon Houston, Houston, TX

0.43 Acres of Land

Analytical Method: VOAs by SW-846 8260

Matrix: Water

Parameter	Spike Amount	Actual Amount	Units
1,1,2-Trichloroethane	0.000500	0.000460	mg/L
Trichloroethene	0.000250	0.000210	mg/L
Trichlorofluoromethane	0.000250	0.000360	mg/L
1,2,3-Trichloropropane	0.000250	0.000270	mg/L
1,2,4-Trimethylbenzene	0.000250	0.000280	mg/L
1,3,5-Trimethylbenzene	0.000250	0.000210	mg/L
o-Xylene	0.000500	0.000430	mg/L
m,p-Xylenes	0.00100	0.000900	mg/L
Vinyl Chloride	0.000250	0.000240	mg/L

CHAIN OF CUSTODY

Page 1 of 2

Revision 2016.1

San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)

www.xenco.com

Phoenix, Arizona (480-355-0900)

Xenco Quote # 561295 **Xenco Job #** 561295
FED-EX / UPS: Tracking # 561295
Matrix Codes

Client / Reporting Information		Project Information	
Company Name / Branch:	Terracon	Project Name/Number:	0.43 Acres of Land / 92177354A
Company Address:	11555 Clay Road, Houston, TX 77043	Project Location:	
Email:		Invoice To:	
Project Contact:	<u>Craig Pawlek / Sheraden Porter</u>	Phone No:	713-690-8989
Sampler's Name	<u>Sheraden Porter</u>	PO Number:	

No.	Field ID / Point of Collection	Collection		Number of preserved bottles		Notes:
		Sample Depth	Date	Time	Matrix	
1	TSP-1(4-6)		8/21/17	1018	S	
2	TSP-1(10-12)			1025	S	
3	TSP-2(4-6)			1120	S	
4	TSP-2(8-10)			1130	S	
5	TSP-3(2-4)			1200	S	
6	TSP-3(8-10)			1210	S	
7	TSP-4(1-2)			12416	S	
8	TSP-4(12-14)			1300	S	
9	TSP-5(2-4)			1330	S	
10	TSP-S(10-12)			1350	S	

Turnaround Time (Business days)		Data Deliverable Information					
<input type="checkbox"/> Same Day TAT	<input checked="" type="checkbox"/> 5 Day TAT	<input type="checkbox"/> Level II Std QC	<input type="checkbox"/> Level IV (Full Data Pkg /raw data)				
<input type="checkbox"/> Next Day EMERGENCY	<input type="checkbox"/> 7 Day TAT	<input type="checkbox"/> Level III Std QC+ Forms	<input type="checkbox"/> TRRP: Level IV				
<input type="checkbox"/> 2 Day EMERGENCY	<input type="checkbox"/> Contract TAT	<input type="checkbox"/> Level 3 (CLP Forms)	<input type="checkbox"/> UST / RG 411				
<input type="checkbox"/> 3 Day EMERGENCY		<input type="checkbox"/> Level II Report with TRRP checklist					

TAT Starts Day received by Lab, if received by 5:00 pm		FED-EX / UPS: Tracking #					
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY							
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:	On Ice	Cooler Temp.
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:		
<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>	<u>Shanahan</u>	8/25/17 0700	<u>Shanahan</u>		



Setting the Standard since 1990

Stafford, Texas (281-240-4200)

CHAIN OF CUSTODY

Revision 2016.1

Client / Reporting Information		Project Information		Analytical Information		501245	Matrix Codes
Company Name / Branch:	Terracon	Project Name/Number:	0.43 Acres of Land / 92177354A				
Company Address:	11555 Clay Road, Houston, TX 77043	Project Location:					
Email:		Invoice To:					
Project Contact:	Gregg Faulkner Shandelle Porter	Phone No:	713-690-8989	PO Number:			
Sampler's Name:	Shandelle Porter						
No.	Field ID / Point of Collection	Collection		Number of preserved bottles			
	Sample Depth	Date	Time	Mattek bottles	# of		
1	TSP-1	824117	1430	6W	HCl	NaOH/Zn Acetate	VOCs by 8260B
2	TSP-2	1500	6W	X	HNO3	H2SO4	TPH by TX1005
3	TSP-3	1730	6W	X	NaOH	NaHSO4	RCRA 8 by 6010, 6020, 7471 (+Sb, Be, Ni)
4	TSP-4	1600	GW	X	MEOH	NONE	PAH by Sim-Pah
5	TSP-5	1700	GW	X			MS/MSD
6	Duplicate	-	S	X			
7	Duplicate	-	GW	X			
8	Equipment Blank	450	W	X			
9	Trip Blank			X			
10							
Turnaround Time (Business days)		Data Deliverable Information				Notes:	
<input type="checkbox"/> Same Day TAT		<input checked="" type="checkbox"/> 5 Day TAT	<input type="checkbox"/> Level II Std QC	<input type="checkbox"/> Level IV (Full Data Pkg / raw data)			
<input type="checkbox"/> Next Day EMERGENCY		<input type="checkbox"/> 7 Day TAT	<input type="checkbox"/> Level III Std QC+ Forms	<input type="checkbox"/> TRRP Level IV			
<input type="checkbox"/> 2 Day EMERGENCY		<input type="checkbox"/> Contract TAT	<input type="checkbox"/> Level 3 (CLP Forms)	<input type="checkbox"/> UST / RG-411			
<input type="checkbox"/> 3 Day EMERGENCY			<input type="checkbox"/> Level II Report with TRRP checklist				
TAT Starts Day received by Lab, if received by 5:00 pm							
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY							
1 Relinquished by:	Received By: Gregg Faulkner	Relinquished By: Gregg Faulkner	Date Time: 8/24/17 09:00	Received By: Gregg Faulkner	Relinquished By: Gregg Faulkner	Date Time: 8/24/17 10:25:17	Received By: Gregg Faulkner
2 Relinquished by:	Received By: Gregg Faulkner	Relinquished By: Gregg Faulkner	Date Time: 8/24/17 10:25:17	Received By: Gregg Faulkner	Relinquished By: Gregg Faulkner	Date Time: 8/24/17 10:25:17	Received By: Gregg Faulkner
3 Relinquished by:	Received By: Gregg Faulkner	Relinquished By: Gregg Faulkner	Date Time: 8/24/17 10:25:17	Received By: Gregg Faulkner	Relinquished By: Gregg Faulkner	Date Time: 8/24/17 10:25:17	Received By: Gregg Faulkner
4 Relinquished by:	Received By: Gregg Faulkner	Relinquished By: Gregg Faulkner	Date Time: 8/24/17 10:25:17	Received By: Gregg Faulkner	Relinquished By: Gregg Faulkner	Date Time: 8/24/17 10:25:17	Received By: Gregg Faulkner
5 Relinquished by:	Received By: Gregg Faulkner	Relinquished By: Gregg Faulkner	Date Time: 8/24/17 10:25:17	Received By: Gregg Faulkner	Relinquished By: Gregg Faulkner	Date Time: 8/24/17 10:25:17	Received By: Gregg Faulkner
FED-EX / UPS: Tracking #							
On Ice Cooler Temp. Thermo. Corr. Factor							
Preserved where applicable							
Notice: Signature of this document and relinquishment of samples constitutes a valid submission under Texas Administrative Code, Title 30, Chapter 373, Subchapter B, Article 1, Section 373.101, Subsection (a).							

Sample Collection and Submission. Xenco will conduct sample collection and submission on behalf of its clients. Xenco will not be liable for any losses or expenses incurred by the Client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at \$5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

Inter-Office Shipment

Page 1 of 1

IOS Number 1048000

Date/Time:	08/25/17 15:38	Created by:	Heidi Goertz	Please send report to:	Debbie Simmons
Lab# From:	Houston	Delivery Priority:		Address:	4147 Greenbriar Dr.
Lab# To:	Dallas	Air Bill No.:	770117958118	Phone:	Stafford, TX 77477
				E-Mail:	debbie.simmons@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
561295-011	W	TSP-1	08/24/17 14:30	SIM_PAH	PAHs by 8270C SIM	HOLD	08/31/17	DES	ACNP ACNPY ANTH BZ α	
561295-012	W	TSP-2	08/24/17 15:00	SIM_PAH	PAHs by 8270C SIM	HOLD	08/31/17	DES	ACNP ACNPY ANTH BZ α	
561295-013	W	TSP-3	08/24/17 17:30	SIM_PAH	PAHs by 8270C SIM	HOLD	08/31/17	DES	ACNP ACNPY ANTH BZ α	
561295-014	W	TSP-4	08/24/17 16:00	SIM_PAH	PAHs by 8270C SIM	HOLD	08/31/17	DES	ACNP ACNPY ANTH BZ α	
561295-015	W	TSP-5	08/24/17 17:00	SW8270C_SIM	PAHs by 8270C SIM	08/30/17	08/31/17	DES	ACNP ACNPY ANTH BZ α	
561295-017	W	Duplicate	08/24/17 00:00	SIM_PAH	PAHs by 8270C SIM	HOLD	08/31/17	DES	ACNP ACNPY ANTH BZ α	
561295-018	W	Equipment Blank	08/24/17 14:50	SIM_PAH	PAHs by 8270C SIM	HOLD	08/31/17	DES	ACNP ACNPY ANTH BZ α	

Inter Office Shipment or Sample Comments:

Relinquished By

Heidi Goertz

Received By

Angelica Martinez

 Date Relinquished: 08/25/2017

 Date Received: 08/28/2017 11:29

 Cooler Temperature: 2.1



XENCO Laboratories

Inter Office Report- Sample Receipt Checklist



Sent To: Dallas

IOS #: 1048000

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sent By: Heidi Goertz

Date Sent: 08/25/2017 03:38 PM

Received By: Angelica Martinez

Date Received: 08/28/2017 11:29 AM

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.1
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____

Contacted by : _____

Date: _____

Checklist reviewed by:

Angelica Martinez
Angelica Martinez

Date: 08/28/2017



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: Terracon Houston

Date/ Time Received: 08/25/2017 03:10:00 PM

Work Order #: 561295

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : hou-068

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	No
#6* Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	Yes
#18 Water VOC samples have zero headspace?	SIM PAH water samples sent to Xenco Dallas (60 ml vials) Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst: PH Device/Lot#:

Checklist completed by:

Heidi Goertz

Date: 08/25/2017

Checklist reviewed by:

Debbie Simmons

Date: 08/29/2017

APPENDIX E

DATA USABILITY SUMMARY

Data Usability Review	
Client Name: City of Houston	Project Number: 92177354A
Affected Property Location: Houston, Texas	Project Manager: Gregg Pawlak
Laboratory: Xenco Laboratories	Laboratory Job No: 561295
Reviewer: Krystine Miller	Date Reviewed: September 22, 2017

One data package from Xenco Laboratories, was reviewed for the analysis of 10 soil samples and five groundwater samples collected at the 0.43 Acres of Land site, by Terracon on August 24, 2017. Data were reviewed for conformance to the requirements of the guidance document, *Review and Reporting of COC oncentration Data* (RG-366/TRRP-13). The results of the review/validation are discussed in this Data Usability Summary (DUS).

The following laboratory submittals were examined:

- the reportable data,
- the laboratory review checklists and associated exception reports

The laboratory summary reports and reportable data included in this review are attached to this DUS.

Intended Use of Data: To provide current data on concentrations of chemicals of concern (COCs) in the soil and groundwater samples at the affected property.

Analyses requested included:

- SW-846 8260B – Volatile Organic Compounds by Gas Chromatography-Mass Spectrometry (GC/MS)
- SW8270D – Semi-Volatile Organic Compounds by Gas Chromatography-Mass Spectrometry (GC/MS)
- TCEQ Method Texas 1005 – Total Petroleum Hydrocarbons (GC/MS)

Introduction

Ten soil samples and five groundwater samples were collected by Terracon. In addition, duplicate samples and samples for MS/MSD were submitted for evaluation. A trip blank water sample and equipment blank water sample were also analyzed for volatile organic compounds (VOCs) only. See the Laboratory Report Certificate of Analysis for a list of samples collected that includes the corresponding filed identification and the laboratory identification.

Sample Results

Sample Condition Upon Receipt

The samples were received at 1.2°C in good condition and are consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Holding Times

No data were rejected for holding time exceedances except SIM PAH water sample 561295-015 which was mistakenly sent to Dallas and exceeded hold time for extraction due to this lab error. All other analyses were within holding times.

Data Usability Review

Approximately 0.43 Acre of Land – MLK ■ Houston, Texas

September 22, 2017 ■ Terracon Project No. 92177354A



Method Blanks

No data were rejected for method blank contamination and all data are usable.

Trip Blank

No data were rejected for the trip blank and all data are usable. No VOCs were detected in the trip blank.

Surrogate recovery data

Surrogate recovery data was not qualified by the laboratory with the exception of the following:

- Surrogates 2-Fluorobiphenyl, Nitrobenzene-d5 and Terphenyl-D14 were recovered below QC limits. Matrix interference was suspected and confirmed by reanalysis. Sample affected 561295-015.

Laboratory control samples (LCS):

No data were qualified or rejected based on LCS QC data evaluation.

Matrix spike (MS) and matrix spike duplicate (MSD) data

MS/MSD %Rs and RPDs were within laboratory QC limits except for the following:

- Sample 561295-012 was designated for MS/MSD for 8260 analysis and the following were recovered outside QC limits: Naphthalene, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Benzene, Ethylbenzene, MTBE, Sec-Butylbenzene, Toluene, isopropylbenzene, m,p-xlenes, n-Butylbenzene, n-Propylbenzene, o-xlenes, p-Cymene, 1,2,3-Trichlorobenzene, Methylene Chloride and Styrene.

Laboratory determined it was due to possible matrix interference. The LCS for these compounds was within Control Limits, therefore the data was accepted.

- Sample 561295-012 was designated for MS/MSD for 1005 analysis and the C6 to C12 range was recovered outside QC limits in samples 561295-011, -012, -013, -014, -015, -017, and -018. The LCS however was within laboratory control limits therefore the data was accepted.
- Soil sample 561295-004 was designated for MS/MSD and the following were recovered outside laboratory Control Limits: Bromomethane, Chloroethane, Trichlorofluoromethane in samples 003, 004, 005, 007, 009 and 016. The LCS was within laboratory Control Limits therefore the data was accepted.
- Soil sample 561295-008 was randomly selected for MS/MSD and 1,1,1,2-Tetrachloroethane, 1,1,2,2-Tetrachloroethane, 1,1-Dichloroethane, 1,2-Dichlorobenzene, 1,2-Dichloropropane, Benzene, Bromobenzene, Bromodichloromethane, Bromoform, Bromomethane, Chloroform, Chloromethane, Dibromochloromethane, Methylene Chloride, Styrene, Vinyl Chloride, and cis-1,3-Dichloropropene were recovered outside laboratory Control Limits. The LCS for the compounds were within Control Limits, therefore the data was accepted.
- For groundwater sample 561295-012 analyzed for 8260, the RPD between the MS and the MSD were above quality control limits for 1,2,3-Trichlorobenzene, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Benzene, Ethylbenzene, MTBE, Methylene Chloride, Naphthalene, Toluene, isopropylbenzene, m,p-xlenes, n-Propylbenzene, and o-xylene, likely due to matrix interference.

Data Usability Review

Approximately 0.43 Acre of Land – MLK ■ Houston, Texas

September 22, 2017 ■ Terracon Project No. 92177354A

**Other problems/anomalies**

Analysis of the equipment blank detected Bromodichloromethane, Dibromochloromethane and Chloroform; however, these compounds were not detected in either the soil or groundwater samples. Data are not compromised.

Water sample 561295-015 had about 20% sand in the sample container causing emulsion of the sample and resulted in elevated detection limits for PAHs. The only compound detected was Naphthalene and the detection limit was still below the Plan A Target Concentration.

Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB)

ICCV and CCV were analyzed at the method-required frequency, percent differences were within method-required limits and the ICAL curve was verified for each analyte.

Dual column confirmation

Dual column confirmation was not completed. Checklist reported NA for this evaluation.

Summary

Based on the data review, the soil and groundwater analytical data are usable for the purpose of determining current COC concentrations at the site with the exception of the groundwater PAH results which exceeded holding times due to laboratory error. The groundwater PAH results are being used as a screening tool only. The results are not usable for the purpose of determining current PAH concentrations in groundwater at the site.

Data Usability Review

Approximately 0.43 Acre of Land – MLK ■ Houston, Texas

September 22, 2017 ■ Terracon Project No. 92177354A

**TABLE 1 - SAMPLE IDENTIFICATION**

Sample Name	Lab Sample Name	Matrix	Collection	Method
TSP-1 (4-6)	561295-001	Soil	8/24/17, 10:18	8260B, TX1005
TSP-1 (10-12)	561295-002	Soil	8/24/17, 10:25	8260B, TX1005
TSP-2 (4-6)	561295-003	Soil	8/24/17, 11:20	8260B, TX1005
TSP-2 (8-10)	561295-004	Soil	8/24/17, 11:30	8260B, TX1005
TSP-3 (2-4)	561295-005	Soil	8/24/17, 12:00	8260B, TX1005, 8270C
TSP-3 (8-10)	561295-006	Soil	8/24/17, 12:10	8260B, TX1005
TSP-4 (1-2)	561295-007	Soil	8/24/17, 12:46	8260B, TX1005
TSP-4 (12-14)	561295-008	Soil	8/24/17, 13:00	8260B, TX1005
TSP-5 (2-4)	561295-009	Soil	8/24/17, 13:30	8260B, TX1005
TSP-5 (10-12)	561295-010	Soil	8/24/17, 13:50	8260B, TX1005
TSP-1	561295-011	Water	8/24/17, 14:30	8260B, TX1005
TSP-2	561295-012	Water	8/24/17, 15:00	8260B, TX1005
TSP-3	561295-013	Water	8/24/17, 17:30	8260B, TX1005
TSP-4	561295-014	Soil	8/24/17, 16:00	8260B, TX1005
TSP-5	561295-015	Soil	8/24/17, 17:00	8260B, TX1005, 8270C
Duplicate	561295-016	Soil	8/24/17, 00:00	8260B, TX1005
Duplicate	561295-017	Water	8/24/17, 00:00	8260B, TX1005
Equipment Blank	561295-018	Water	8/24/17, 14:50	8260B
Trip Blank	561295-019	Water	8/24/17, 00:00	8260B

APPENDIX B

LABORATORY NELAP ACCREDITATION CERTIFICATE



Texas Commission on Environmental Quality

NELAP - Recognized Laboratory Fields of Accreditation



Xenco Laboratories - Houston
4147 Greenbriar Drive
Stafford, TX 77477-3907

Certificate: T104704215-17-23
Expiration Date: 6/30/2018
Issue Date: 7/1/2017

These fields of accreditation supercede all previous fields. The Texas Commission on Environmental Quality urges customers to verify the laboratory's current accreditation status for particular methods and analyses.

Matrix: Drinking Water

Method EPA 120.1

Analyte	AB	Analyte ID	Method ID
Conductivity	TX	1610	10006403

Method EPA 200.7

Analyte	AB	Analyte ID	Method ID
Aluminum	TX	1000	10013806
Antimony	TX	1005	10013806
Arsenic	TX	1010	10013806
Barium	TX	1015	10013806
Beryllium	TX	1020	10013806
Boron	TX	1025	10013806
Cadmium	TX	1030	10013806
Chromium	TX	1040	10013806
Cobalt	TX	1050	10013806
Copper	TX	1055	10013806
Iron	TX	1070	10013806
Lead	TX	1075	10013806
Lithium	TX	1080	10013806
Magnesium	TX	1085	10013806
Manganese	TX	1090	10013806
Molybdenum	TX	1100	10013806
Nickel	TX	1105	10013806
Potassium	TX	1125	10013806
Selenium	TX	1140	10013806
Silica as SiO ₂	TX	1990	10013806
Silver	TX	1150	10013806
Sodium	TX	1155	10013806
Strontium	TX	1160	10013806
Tin	TX	1175	10013806
Titanium	TX	1180	10013806
Vanadium	TX	1185	10013806



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Matrix: Drinking Water

Zinc	TX	1190	10013806
Method EPA 200.8			
Analyte	AB	Analyte ID	Method ID
Aluminum	TX	1000	10014605
Antimony	TX	1005	10014605
Arsenic	TX	1010	10014605
Barium	TX	1015	10014605
Beryllium	TX	1020	10014605
Cadmium	TX	1030	10014605
Chromium	TX	1040	10014605
Copper	TX	1055	10014605
Lead	TX	1075	10014605
Manganese	TX	1090	10014605
Nickel	TX	1105	10014605
Selenium	TX	1140	10014605
Silver	TX	1150	10014605
Thallium	TX	1165	10014605
Uranium	TX	3035	10014605
Zinc	TX	1190	10014605
Method EPA 245.1			
Analyte	AB	Analyte ID	Method ID
Mercury	TX	1095	10036609
Method EPA 300.0			
Analyte	AB	Analyte ID	Method ID
Bromide	TX	1540	10053200
Chloride	TX	1575	10053200
Fluoride	TX	1730	10053200
Nitrate as N	TX	1810	10053200
Nitrite as N	TX	1840	10053200
Sulfate	TX	2000	10053200



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Matrix: Drinking Water

Method EPA 335.4

Analyte	AB	Analyte ID	Method ID
Total cyanide	TX	1645	10061402

Method EPA 353.2

Analyte	AB	Analyte ID	Method ID
Nitrate as N	TX	1810	10067604
Nitrite as N	TX	1840	10067604

Method EPA 504.1

Analyte	AB	Analyte ID	Method ID
1,2-Dibromo-3-chloropropane (DBCP)	TX	4570	10082801
1,2-Dibromoethane (EDB, Ethylene dibromide)	TX	4585	10082801

Method EPA 508

Analyte	AB	Analyte ID	Method ID
Chlordane (tech.)	TX	7250	10085208
Endrin	TX	7540	10085208
gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	TX	7120	10085208
Heptachlor	TX	7685	10085208
Heptachlor epoxide	TX	7690	10085208
Hexachlorobenzene	TX	6275	10085208
Hexachlorocyclopentadiene	TX	6285	10085208
Methoxychlor	TX	7810	10085208
PCB Aroclor Identification	TX	8872	10085208
Toxaphene (Chlorinated camphene)	TX	8250	10085208

Method EPA 515.1

Analyte	AB	Analyte ID	Method ID
2,4-D	TX	8545	10087204
Dalapon	TX	8555	10087204
Dinoseb (2-sec-butyl-4,6-dinitrophenol, DNBP)	TX	8620	10087204
Pentachlorophenol	TX	6605	10087204
Picloram	TX	8645	10087204
Silvex (2,4,5-TP)	TX	8650	10087204



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Matrix: Drinking Water

Method EPA 524.2

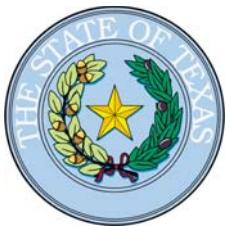
Analyte	AB	Analyte ID	Method ID
1,1,1-Trichloroethane	TX	5160	10088809
1,1,2-Trichloroethane	TX	5165	10088809
1,1-Dichloroethylene	TX	4640	10088809
1,2,4-Trichlorobenzene	TX	5155	10088809
1,2-Dichlorobenzene	TX	4610	10088809
1,2-Dichloroethane (Ethylene dichloride)	TX	4635	10088809
1,2-Dichloropropane	TX	4655	10088809
1,4-Dichlorobenzene	TX	4620	10088809
Benzene	TX	4375	10088809
Carbon tetrachloride	TX	4455	10088809
Chlorobenzene	TX	4475	10088809
cis-1,2-Dichloroethylene	TX	4645	10088809
Ethylbenzene	TX	4765	10088809
m+p-xylene	TX	5240	10088809
Methylene chloride (Dichloromethane)	TX	4975	10088809
o-Xylene	TX	5250	10088809
Styrene	TX	5100	10088809
Tetrachloroethylene (Perchloroethylene)	TX	5115	10088809
Toluene	TX	5140	10088809
Total trihalomethanes	TX	5205	10088809
trans-1,2-Dichloroethylene	TX	4700	10088809
Trichloroethene (Trichloroethylene)	TX	5170	10088809
Vinyl chloride	TX	5235	10088809
Xylene (total)	TX	5260	10088809

Method EPA 552.3

Analyte	AB	Analyte ID	Method ID
Total haloacetic acids	TX	9414	10239608

Method SM 2510 B

Analyte	AB	Analyte ID	Method ID



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Matrix: Drinking Water

Conductivity	TX	1610	20048004
Method SM 2540 C			
Analyte	AB	Analyte ID	Method ID
Residue-filterable (TDS)	TX	1955	20049803



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Matrix: Non-Potable Water

Method	EPA 1010	AB	Analyte ID	Method ID
	Analyte Ignitability	TX	1780	10116606
Method	EPA 120.1	AB	Analyte ID	Method ID
	Analyte Conductivity	TX	1610	10006403
Method	EPA 1311	AB	Analyte ID	Method ID
	Analyte TCLP	TX	849	10118806
Method	EPA 1312	AB	Analyte ID	Method ID
	Analyte SPLP	TX	850	10119003
Method	EPA 160.4	AB	Analyte ID	Method ID
	Analyte Residue-volatile	TX	1970	10010409
Method	EPA 1664	AB	Analyte ID	Method ID
	Analyte n-Hexane Extractable Material (HEM) (O&G)	TX	1803	10127807
Method	EPA 180.1	AB	Analyte ID	Method ID
	Analyte Turbidity	TX	2055	10011606
Method	EPA 200.7	AB	Analyte ID	Method ID
	Analyte Aluminum	TX	1000	10013806
	Analyte Antimony	TX	1005	10013806
	Analyte Arsenic	TX	1010	10013806
	Analyte Barium	TX	1015	10013806
	Analyte Beryllium	TX	1020	10013806
	Analyte Boron	TX	1025	10013806
	Analyte Cadmium	TX	1030	10013806
	Analyte Calcium	TX	1035	10013806



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Matrix: Non-Potable Water

Chromium	TX	1040	10013806
Cobalt	TX	1050	10013806
Copper	TX	1055	10013806
Iron	TX	1070	10013806
Lead	TX	1075	10013806
Lithium	TX	1080	10013806
Magnesium	TX	1085	10013806
Manganese	TX	1090	10013806
Molybdenum	TX	1100	10013806
Nickel	TX	1105	10013806
Potassium	TX	1125	10013806
Selenium	TX	1140	10013806
Silica as SiO ₂	TX	1990	10013806
Silver	TX	1150	10013806
Sodium	TX	1155	10013806
Strontium	TX	1160	10013806
Thallium	TX	1165	10013806
Tin	TX	1175	10013806
Titanium	TX	1180	10013806
Vanadium	TX	1185	10013806
Zinc	TX	1190	10013806

Method EPA 200.8

Analyte	AB	Analyte ID	Method ID
Aluminum	TX	1000	10014605
Antimony	TX	1005	10014605
Arsenic	TX	1010	10014605
Barium	TX	1015	10014605
Beryllium	TX	1020	10014605
Boron	TX	1025	10014605
Cadmium	TX	1030	10014605



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Matrix: Non-Potable Water

Chromium	TX	1040	10014605
Cobalt	TX	1050	10014605
Copper	TX	1055	10014605
Iron	TX	1070	10014605
Lead	TX	1075	10014605
Magnesium	TX	1085	10014605
Manganese	TX	1090	10014605
Molybdenum	TX	1100	10014605
Nickel	TX	1105	10014605
Potassium	TX	1125	10014605
Selenium	TX	1140	10014605
Silver	TX	1150	10014605
Sodium	TX	1155	10014605
Strontium	TX	1160	10014605
Thallium	TX	1165	10014605
Tin	TX	1175	10014605
Titanium	TX	1180	10014605
Uranium	TX	3035	10014605
Vanadium	TX	1185	10014605
Zinc	TX	1190	10014605

Method EPA 245.1

Analyte	AB	Analyte ID	Method ID
Mercury	TX	1095	10036609

Method EPA 300.0

Analyte	AB	Analyte ID	Method ID
Bromide	TX	1540	10053200
Chloride	TX	1575	10053200
Fluoride	TX	1730	10053200
Nitrate as N	TX	1810	10053200
Nitrate-nitrite	TX	1820	10053200
Nitrite as N	TX	1840	10053200



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Matrix: Non-Potable Water

Sulfate	TX	2000	10053200
Method EPA 335.4			
Analyte	AB	Analyte ID	Method ID
Total cyanide	TX	1645	10061402
Method EPA 350.1			
Analyte	AB	Analyte ID	Method ID
Ammonia as N	TX	1515	10063408
Method EPA 351.2			
Analyte	AB	Analyte ID	Method ID
Kjeldahl Nitrogen (Total Kjeldahl Nitrogen-TKN)	TX	1790	10065404
Method EPA 353.2			
Analyte	AB	Analyte ID	Method ID
Nitrate as N	TX	1810	10067400
Nitrate-nitrite	TX	1820	10067400
Nitrite as N	TX	1840	10067400
Method EPA 365.1			
Analyte	AB	Analyte ID	Method ID
Orthophosphate as P	TX	1870	10070005
Phosphorus	TX	1910	10070005
Method EPA 420.4			
Analyte	AB	Analyte ID	Method ID
Total phenolics	TX	1905	10080203
Method EPA 524.2			
Analyte	AB	Analyte ID	Method ID
1,2-Dichlorobenzene	TX	4610	10088809
1,2-Dichloroethane (Ethylene dichloride)	TX	4635	10088809
4-Methyl-2-pentanone (MIBK)	TX	4995	10088809
Benzene	TX	4375	10088809
Chlorobenzene	TX	4475	10088809
Chloroform	TX	4505	10088809
Methyl tert-butyl ether (MTBE)	TX	5000	10088809



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Matrix: Non-Potable Water

Methylene chloride (Dichloromethane)	TX	4975	10088809
Tetrahydrofuran (THF)	TX	5120	10088809
Toluene	TX	5140	10088809

Method EPA 6010

Analyte	AB	Analyte ID	Method ID
Aluminum	TX	1000	10155609
Antimony	TX	1005	10155609
Arsenic	TX	1010	10155609
Barium	TX	1015	10155609
Beryllium	TX	1020	10155609
Boron	TX	1025	10155609
Cadmium	TX	1030	10155609
Calcium	TX	1035	10155609
Chromium	TX	1040	10155609
Cobalt	TX	1050	10155609
Copper	TX	1055	10155609
Iron	TX	1070	10155609
Lead	TX	1075	10155609
Lithium	TX	1080	10155609
Magnesium	TX	1085	10155609
Manganese	TX	1090	10155609
Molybdenum	TX	1100	10155609
Nickel	TX	1105	10155609
Phosphorus	TX	1910	10155609
Potassium	TX	1125	10155609
Selenium	TX	1140	10155609
Silica as SiO ₂	TX	1990	10155609
Silver	TX	1150	10155609
Sodium	TX	1155	10155609
Strontium	TX	1160	10155609



Texas Commission on Environmental Quality

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Issue Date: 7/1/2017

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Matrix: Non-Potable Water

Thallium	TX	1165	10155609
Tin	TX	1175	10155609
Titanium	TX	1180	10155609
Vanadium	TX	1185	10155609
Zinc	TX	1190	10155609

Method EPA 6020

Analyte	AB	Analyte ID	Method ID
Aluminum	TX	1000	10156408
Antimony	TX	1005	10156408
Arsenic	TX	1010	10156408
Barium	TX	1015	10156408
Beryllium	TX	1020	10156408
Boron	TX	1025	10156408
Cadmium	TX	1030	10156408
Chromium	TX	1040	10156408
Cobalt	TX	1050	10156408
Copper	TX	1055	10156408
Iron	TX	1070	10156408
Lead	TX	1075	10156408
Magnesium	TX	1085	10156408
Manganese	TX	1090	10156408
Molybdenum	TX	1100	10156408
Nickel	TX	1105	10156408
Potassium	TX	1125	10156408
Selenium	TX	1140	10156408
Silver	TX	1150	10156408
Sodium	TX	1155	10156408
Strontium	TX	1160	10156408
Thallium	TX	1165	10156408
Tin	TX	1175	10156408



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Matrix: Non-Potable Water

Titanium	TX	1180	10156408
Vanadium	TX	1185	10156408
Zinc	TX	1190	10156408
Method EPA 608			
Analyte	AB	Analyte ID	Method ID
4,4'-DDD	TX	7355	10103603
4,4'-DDE	TX	7360	10103603
4,4'-DDT	TX	7365	10103603
Aldrin	TX	7025	10103603
alpha-BHC (alpha-Hexachlorocyclohexane)	TX	7110	10103603
alpha-Chlordane	TX	7240	10103603
Aroclor-1016 (PCB-1016)	TX	8880	10103603
Aroclor-1221 (PCB-1221)	TX	8885	10103603
Aroclor-1232 (PCB-1232)	TX	8890	10103603
Aroclor-1242 (PCB-1242)	TX	8895	10103603
Aroclor-1248 (PCB-1248)	TX	8900	10103603
Aroclor-1254 (PCB-1254)	TX	8905	10103603
Aroclor-1260 (PCB-1260)	TX	8910	10103603
beta-BHC (beta-Hexachlorocyclohexane)	TX	7115	10103603
Chlordane (tech.)	TX	7250	10103603
delta-BHC (delta-Hexachlorocyclohexane)	TX	7105	10103603
Dieldrin	TX	7470	10103603
Endosulfan I	TX	7510	10103603
Endosulfan II	TX	7515	10103603
Endosulfan sulfate	TX	7520	10103603
Endrin	TX	7540	10103603
Endrin aldehyde	TX	7530	10103603
gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	TX	7120	10103603
gamma-Chlordane	TX	7245	10103603
Heptachlor	TX	7685	10103603



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Matrix: Non-Potable Water

Heptachlor epoxide	TX	7690	10103603
Methoxychlor	TX	7810	10103603
Toxaphene (Chlorinated camphene)	TX	8250	10103603

Method EPA 615

Analyte	AB	Analyte ID	Method ID
2,4,5-T	TX	8655	10105609
2,4-D	TX	8545	10105609
2,4-DB	TX	8560	10105609
Dalapon	TX	8555	10105609
Dicamba	TX	8595	10105609
Dichloroprop (Dichlorprop, Weedone)	TX	8605	10105609
Dinoseb (2-sec-butyl-4,6-dinitrophenol, DNBP)	TX	8620	10105609
MCPA	TX	7775	10105609
MCPP	TX	7780	10105609
Silvex (2,4,5-TP)	TX	8650	10105609

Method EPA 624

Analyte	AB	Analyte ID	Method ID
1,1,1-Trichloroethane	TX	5160	10107207
1,1,2,2-Tetrachloroethane	TX	5110	10107207
1,1,2-Trichloroethane	TX	5165	10107207
1,1-Dichloroethane	TX	4630	10107207
1,1-Dichloroethylene	TX	4640	10107207
1,2-Dibromoethane (EDB, Ethylene dibromide)	TX	4585	10107207
1,2-Dichlorobenzene	TX	4610	10107207
1,2-Dichloroethane (Ethylene dichloride)	TX	4635	10107207
1,2-Dichloropropane	TX	4655	10107207
1,3-Dichlorobenzene	TX	4615	10107207
1,4-Dichlorobenzene	TX	4620	10107207
2-Butanone (Methyl ethyl ketone, MEK)	TX	4410	10107207
2-Chloroethyl vinyl ether	TX	4500	10107207
Acetone (2-Propanone)	TX	4315	10107207



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Matrix: Non-Potable Water

Acrolein (Propenal)	TX	4325	10107207
Acrylonitrile	TX	4340	10107207
Benzene	TX	4375	10107207
Bromodichloromethane	TX	4395	10107207
Bromoform	TX	4400	10107207
Carbon tetrachloride	TX	4455	10107207
Chlorobenzene	TX	4475	10107207
Chlorodibromomethane	TX	4575	10107207
Chloroethane (Ethyl chloride)	TX	4485	10107207
Chloroform	TX	4505	10107207
cis-1,2-Dichloroethylene	TX	4645	10107207
cis-1,3-Dichloropropene	TX	4680	10107207
Ethylbenzene	TX	4765	10107207
m+p-xylene	TX	5240	10107207
Methyl bromide (Bromomethane)	TX	4950	10107207
Methyl chloride (Chloromethane)	TX	4960	10107207
Methyl tert-butyl ether (MTBE)	TX	5000	10107207
Methylene chloride (Dichloromethane)	TX	4975	10107207
o-Xylene	TX	5250	10107207
Tetrachloroethylene (Perchloroethylene)	TX	5115	10107207
Toluene	TX	5140	10107207
trans-1,2-Dichloroethylene	TX	4700	10107207
trans-1,3-Dichloropropylene	TX	4685	10107207
Trichloroethene (Trichloroethylene)	TX	5170	10107207
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	TX	5175	10107207
Vinyl chloride	TX	5235	10107207
Xylene (total)	TX	5260	10107207

Method EPA 625

Analyte	AB	Analyte ID	Method ID
2,2'-Oxybis(1-chloropropane) (bis(2-Chloro-1-methylethyl)ether)	TX	4659	10107401



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Matrix: Non-Potable Water

1,2,4,5-Tetrachlorobenzene	TX	6715	10107401
1,2,4-Trichlorobenzene	TX	5155	10107401
1,2-Dichlorobenzene	TX	4610	10107401
1,2-Diphenylhydrazine	TX	6220	10107401
1,3-Dichlorobenzene	TX	4615	10107401
1,4-Dichlorobenzene	TX	4620	10107401
2,3,4,6-Tetrachlorophenol	TX	6735	10107401
2,4,5-Trichlorophenol	TX	6835	10107401
2,4,6-Trichlorophenol	TX	6840	10107401
2,4-Dichlorophenol	TX	6000	10107401
2,4-Dimethylphenol	TX	6130	10107401
2,4-Dinitrophenol	TX	6175	10107401
2,4-Dinitrotoluene (2,4-DNT)	TX	6185	10107401
2,6-Dinitrotoluene (2,6-DNT)	TX	6190	10107401
2-Chloronaphthalene	TX	5795	10107401
2-Chlorophenol	TX	5800	10107401
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	TX	6360	10107401
2-Methylphenol (o-Cresol)	TX	6400	10107401
2-Nitrophenol	TX	6490	10107401
3,3'-Dichlorobenzidine	TX	5945	10107401
4-Bromophenyl phenyl ether (BDE-3)	TX	5660	10107401
4-Chloro-3-methylphenol	TX	5700	10107401
4-Chlorophenyl phenylether	TX	5825	10107401
4-Methylphenol (p-Cresol)	TX	6410	10107401
4-Nitrophenol	TX	6500	10107401
Acenaphthene	TX	5500	10107401
Acenaphthylene	TX	5505	10107401
Anthracene	TX	5555	10107401
Benzidine	TX	5595	10107401
Benzo(a)anthracene	TX	5575	10107401



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Matrix: Non-Potable Water

Benzo(a)pyrene	TX	5580	10107401
Benzo(b)fluoranthene	TX	5585	10107401
Benzo(g,h,i)perylene	TX	5590	10107401
Benzo(k)fluoranthene	TX	5600	10107401
bis(2-Chloroethoxy)methane	TX	5760	10107401
bis(2-Chloroethyl) ether	TX	5765	10107401
bis(2-Ethylhexyl) phthalate (Di(2-Ethylhexyl) phthalate, DEHP)	TX	6065	10107401
Butyl benzyl phthalate	TX	5670	10107401
Chrysene	TX	5855	10107401
Dibenz(a,h) anthracene	TX	5895	10107401
Diethyl phthalate	TX	6070	10107401
Dimethyl phthalate	TX	6135	10107401
Di-n-butyl phthalate	TX	5925	10107401
Di-n-octyl phthalate	TX	6200	10107401
Fluoranthene	TX	6265	10107401
Fluorene	TX	6270	10107401
Hexachlorobenzene	TX	6275	10107401
Hexachlorobutadiene	TX	4835	10107401
Hexachlorocyclopentadiene	TX	6285	10107401
Hexachloroethane	TX	4840	10107401
Indeno(1,2,3-cd) pyrene	TX	6315	10107401
Isophorone	TX	6320	10107401
Naphthalene	TX	5005	10107401
Nitrobenzene	TX	5015	10107401
n-Nitrosodiethylamine	TX	6525	10107401
n-Nitrosodimethylamine	TX	6530	10107401
n-Nitrosodi-n-butylamine	TX	5025	10107401
n-Nitrosodi-n-propylamine	TX	6545	10107401
n-Nitrosodiphenylamine	TX	6535	10107401
Pentachlorobenzene	TX	6590	10107401



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Matrix: Non-Potable Water

Pentachlorophenol	TX	6605	10107401
Phenanthrene	TX	6615	10107401
Phenol	TX	6625	10107401
Pyrene	TX	6665	10107401
Pyridine	TX	5095	10107401

Method EPA 7196

Analyte	AB	Analyte ID	Method ID
Chromium (VI)	TX	1045	10162206

Method EPA 7470

Analyte	AB	Analyte ID	Method ID
Mercury	TX	1095	10165603

Method EPA 8011

Analyte	AB	Analyte ID	Method ID
1,2,3-Trichloropropane	TX	5180	10173009
1,2-Dibromo-3-chloropropane (DBCP)	TX	4570	10173009
1,2-Dibromoethane (EDB, Ethylene dibromide)	TX	4585	10173009

Method EPA 8015

Analyte	AB	Analyte ID	Method ID
Diesel range organics (DRO)	TX	9369	10173203
Gasoline range organics (GRO)	TX	9408	10173203

Method EPA 8081

Analyte	AB	Analyte ID	Method ID
4,4'-DDD	TX	7355	10178800
4,4'-DDE	TX	7360	10178800
4,4'-DDT	TX	7365	10178800
Alachlor	TX	7005	10178800
Aldrin	TX	7025	10178800
alpha-BHC (alpha-Hexachlorocyclohexane)	TX	7110	10178800
alpha-Chlordane	TX	7240	10178800
beta-BHC (beta-Hexachlorocyclohexane)	TX	7115	10178800
Chlordane (tech.)	TX	7250	10178800



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Matrix: Non-Potable Water

delta-BHC (delta-Hexachlorocyclohexane)	TX	7105	10178800
Dicofol (Kelthane)	TX	7460	10178800
Dieldrin	TX	7470	10178800
Endosulfan I	TX	7510	10178800
Endosulfan II	TX	7515	10178800
Endosulfan sulfate	TX	7520	10178800
Endrin	TX	7540	10178800
Endrin aldehyde	TX	7530	10178800
Endrin ketone	TX	7535	10178800
gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	TX	7120	10178800
gamma-Chlordane	TX	7245	10178800
Heptachlor	TX	7685	10178800
Heptachlor epoxide	TX	7690	10178800
Methoxychlor	TX	7810	10178800
Mirex	TX	7870	10178800
Toxaphene (Chlorinated camphene)	TX	8250	10178800

Method EPA 8082

Analyte	AB	Analyte ID	Method ID
2,2',3,4,4',5'-Hexachlorobiphenyl (BZ-138)	TX	9025	10179201
2,2',3,4',5,5',6-Heptachlorobiphenyl (BZ-187)	TX	9080	10179201
2,2',3',4,5-Pentachlorobiphenyl (BZ-97)	TX	9154	10179201
2,2',3,5,5',6-Hexachlorobiphenyl (BZ-151)	TX	9035	10179201
2,2',3,5'-Tetrachlorobiphenyl (BZ-44)	TX	8945	10179201
2,2',4,5,5'-Pentachlorobiphenyl (BZ-101)	TX	8980	10179201
2,2',5,5'-Tetrachlorobiphenyl (BZ-52)	TX	8955	10179201
2,2',5-Trichlorobiphenyl (BZ-18)	TX	8930	10179201
2,3,3',4,5,5'-Hexachlorobiphenyl (BZ-159)	TX	9196	10179201
2,3,3',4',6-Pentachlorobiphenyl (BZ-110)	TX	8990	10179201
2,3',4,4'-Tetrachlorobiphenyl (BZ-66)	TX	8960	10179201
2,3-Dichlorobiphenyl (BZ-5)	TX	8920	10179201



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Matrix: Non-Potable Water

2,4',5-Trichlorobiphenyl (BZ-31)	TX	8940	10179201
2-Chlorobiphenyl (BZ-1)	TX	8915	10179201
Aroclor-1016 (PCB-1016)	TX	8880	10179201
Aroclor-1221 (PCB-1221)	TX	8885	10179201
Aroclor-1232 (PCB-1232)	TX	8890	10179201
Aroclor-1242 (PCB-1242)	TX	8895	10179201
Aroclor-1248 (PCB-1248)	TX	8900	10179201
Aroclor-1254 (PCB-1254)	TX	8905	10179201
Aroclor-1260 (PCB-1260)	TX	8910	10179201
PCBs (total)	TX	8870	10179201

Method EPA 8151

Analyte	AB	Analyte ID	Method ID
2,4,5-T	TX	8655	10183003
2,4-D	TX	8545	10183003
2,4-DB	TX	8560	10183003
Dalapon	TX	8555	10183003
Dicamba	TX	8595	10183003
Dichloroprop (Dichlorprop, Weedone)	TX	8605	10183003
Dinoseb (2-sec-butyl-4,6-dinitrophenol, DNBP)	TX	8620	10183003
MCPA	TX	7775	10183003
MCPP	TX	7780	10183003
Pentachlorophenol	TX	6605	10183003
Picloram	TX	8645	10183003
Silvex (2,4,5-TP)	TX	8650	10183003

Method EPA 8260

Analyte	AB	Analyte ID	Method ID
1,1,1,2-Tetrachloroethane	TX	5105	10184404
1,1,1-Trichloroethane	TX	5160	10184404
1,1,2,2-Tetrachloroethane	TX	5110	10184404
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	TX	5195	10184404
1,1,2-Trichloroethane	TX	5165	10184404



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Matrix: Non-Potable Water

1,1-Dichloroethane	TX	4630	10184404
1,1-Dichloroethylene	TX	4640	10184404
1,1-Dichloropropene	TX	4670	10184404
1,2,3-Trichlorobenzene	TX	5150	10184404
1,2,3-Trichloropropane	TX	5180	10184404
1,2,4-Trichlorobenzene	TX	5155	10184404
1,2,4-Trimethylbenzene	TX	5210	10184404
1,2-Dibromo-3-chloropropane (DBCP)	TX	4570	10184404
1,2-Dibromoethane (EDB, Ethylene dibromide)	TX	4585	10184404
1,2-Dichlorobenzene	TX	4610	10184404
1,2-Dichloroethane (Ethylene dichloride)	TX	4635	10184404
1,2-Dichloropropane	TX	4655	10184404
1,3,5-Trimethylbenzene	TX	5215	10184404
1,3-Dichlorobenzene	TX	4615	10184404
1,3-Dichloropropane	TX	4660	10184404
1,4-Dichlorobenzene	TX	4620	10184404
1,4-Dioxane (1,4-Diethyleneoxide)	TX	4735	10184404
1-Chlorohexane	TX	4510	10184404
2,2-Dichloropropane	TX	4665	10184404
2-Butanone (Methyl ethyl ketone, MEK)	TX	4410	10184404
2-Chloroethyl vinyl ether	TX	4500	10184404
2-Chlorotoluene	TX	4535	10184404
2-Hexanone (MBK)	TX	4860	10184404
4-Chlorotoluene	TX	4540	10184404
4-Isopropyltoluene (p-Cymene)	TX	4915	10184404
4-Methyl-2-pentanone (MIBK)	TX	4995	10184404
Acetone (2-Propanone)	TX	4315	10184404
Acetonitrile	TX	4320	10184404
Acrolein (Propenal)	TX	4325	10184404
Acrylonitrile	TX	4340	10184404



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Matrix: Non-Potable Water

Benzene	TX	4375	10184404
Bromobenzene	TX	4385	10184404
Bromochloromethane	TX	4390	10184404
Bromodichloromethane	TX	4395	10184404
Bromoform	TX	4400	10184404
Carbon disulfide	TX	4450	10184404
Carbon tetrachloride	TX	4455	10184404
Chlorobenzene	TX	4475	10184404
Chlorodibromomethane	TX	4575	10184404
Chloroethane (Ethyl chloride)	TX	4485	10184404
Chloroform	TX	4505	10184404
cis-1,2-Dichloroethylene	TX	4645	10184404
cis-1,3-Dichloropropene	TX	4680	10184404
Dibromofluoromethane	TX	4590	10184404
Dibromomethane (Methylene bromide)	TX	4595	10184404
Dichlorodifluoromethane (Freon-12)	TX	4625	10184404
Di-isopropylether (DIPE)	TX	9375	10184404
Ethyl methacrylate	TX	4810	10184404
Ethylbenzene	TX	4765	10184404
Ethyl-t-butylether (ETBE) (2-Ethoxy-2-methylpropane)	TX	4770	10184404
Hexachlorobutadiene	TX	4835	10184404
Iodomethane (Methyl iodide)	TX	4870	10184404
Isopropylbenzene (Cumene)	TX	4900	10184404
m+p-xylene	TX	5240	10184404
Methyl acetate	TX	4940	10184802
Methyl bromide (Bromomethane)	TX	4950	10184404
Methyl chloride (Chloromethane)	TX	4960	10184404
Methyl tert-butyl ether (MTBE)	TX	5000	10184404
Methylcyclohexane	TX	4965	10184608
Methylene chloride (Dichloromethane)	TX	4975	10184404



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Matrix: Non-Potable Water

Naphthalene	TX	5005	10184404
n-Butylbenzene	TX	4435	10184404
n-Propylbenzene	TX	5090	10184404
o-Xylene	TX	5250	10184404
sec-Butylbenzene	TX	4440	10184404
Styrene	TX	5100	10184404
T-amylmethylether (TAME)	TX	4370	10184404
tert-Butyl alcohol	TX	4420	10184404
tert-Butylbenzene	TX	4445	10184404
Tetrachloroethylene (Perchloroethylene)	TX	5115	10184404
Toluene	TX	5140	10184404
trans-1,2-Dichloroethylene	TX	4700	10184404
trans-1,3-Dichloropropylene	TX	4685	10184404
trans-1,4-Dichloro-2-butene	TX	4605	10184404
Trichloroethene (Trichloroethylene)	TX	5170	10184404
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	TX	5175	10184404
Vinyl acetate	TX	5225	10184404
Vinyl chloride	TX	5235	10184404
Xylene (total)	TX	5260	10184404

Method EPA 8270

Analyte	AB	Analyte ID	Method ID
2,2'-Oxybis(1-chloropropane) (bis(2-Chloro-1-methylethyl)ether)	TX	4659	10185805
1,2,4,5-Tetrachlorobenzene	TX	6715	10185601
1,2,4-Trichlorobenzene	TX	5155	10185805
1,2-Dichlorobenzene	TX	4610	10185805
1,2-Dinitrobenzene	TX	6155	10185805
1,2-Diphenylhydrazine	TX	6220	10185805
1,3-Dichlorobenzene	TX	4615	10185805
1,3-Dinitrobenzene (1,3-DNB)	TX	6160	10185805
1,4-Dichlorobenzene	TX	4620	10185805



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Matrix: Non-Potable Water

1-Chloronaphthalene	TX	5790	10185805
2,3,4,6-Tetrachlorophenol	TX	6735	10185805
2,4,5-Trichlorophenol	TX	6835	10185805
2,4,6-Trichlorophenol	TX	6840	10185805
2,4-Dichlorophenol	TX	6000	10185805
2,4-Dimethylphenol	TX	6130	10185805
2,4-Dinitrophenol	TX	6175	10185805
2,4-Dinitrotoluene (2,4-DNT)	TX	6185	10185805
2,6-Dichlorophenol	TX	6005	10185805
2,6-Dinitrotoluene (2,6-DNT)	TX	6190	10185805
2-Chloronaphthalene	TX	5795	10185805
2-Chlorophenol	TX	5800	10185805
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	TX	6360	10185805
2-Methylnaphthalene	TX	6385	10185805
2-Methylphenol (o-Cresol)	TX	6400	10185805
2-Nitroaniline	TX	6460	10185805
2-Nitrophenol	TX	6490	10185805
2-Picoline (2-Methylpyridine)	TX	5050	10185805
3,3'-Dichlorobenzidine	TX	5945	10185805
3-Methylphenol (m-Cresol)	TX	6405	10185805
3-Nitroaniline	TX	6465	10185805
4-Bromophenyl phenyl ether (BDE-3)	TX	5660	10185805
4-Chloro-3-methylphenol	TX	5700	10185805
4-Chloroaniline	TX	5745	10185805
4-Chlorophenyl phenylether	TX	5825	10185805
4-Methylphenol (p-Cresol)	TX	6410	10185805
4-Nitroaniline	TX	6470	10185805
4-Nitrophenol	TX	6500	10185805
Acenaphthene	TX	5500	10185805
Acenaphthylene	TX	5505	10185805



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Matrix: Non-Potable Water

Acetophenone	TX	5510	10185805
Aniline	TX	5545	10185805
Anthracene	TX	5555	10185805
Atrazine	TX	7065	10186002
Benzidine	TX	5595	10185805
Benzo(a)anthracene	TX	5575	10185805
Benzo(a)pyrene	TX	5580	10185805
Benzo(b)fluoranthene	TX	5585	10185805
Benzo(g,h,i)perylene	TX	5590	10185805
Benzo(k)fluoranthene	TX	5600	10185805
Benzoic acid	TX	5610	10185805
Benzyl alcohol	TX	5630	10185805
Biphenyl	TX	5640	10185601
bis(2-Chloroethoxy)methane	TX	5760	10185805
bis(2-Chloroethyl) ether	TX	5765	10185805
bis(2-Ethylhexyl) phthalate (Di(2-Ethylhexyl) phthalate, DEHP)	TX	6065	10185805
Butyl benzyl phthalate	TX	5670	10185805
Caprolactam	TX	7180	10185805
Carbaryl (Sevin)	TX	7195	10185805
Carbazole	TX	5680	10185805
Chrysene	TX	5855	10185805
Dibenz(a,h) anthracene	TX	5895	10185805
Dibenzo(a,e) pyrene	TX	5890	10185805
Dibenzofuran	TX	5905	10185805
Diethyl phthalate	TX	6070	10185805
Dimethyl phthalate	TX	6135	10185805
Di-n-butyl phthalate	TX	5925	10185805
Di-n-octyl phthalate	TX	6200	10185805
Diphenylamine	TX	6205	10185805
Ethyl methanesulfonate	TX	6260	10185805



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Matrix: Non-Potable Water

Fluoranthene	TX	6265	10185805
Fluorene	TX	6270	10185805
Hexachlorobenzene	TX	6275	10185805
Hexachlorobutadiene	TX	4835	10185805
Hexachlorocyclopentadiene	TX	6285	10185805
Hexachloroethane	TX	4840	10185805
Hexachlorophene	TX	6290	10185805
Hexachloropropene	TX	6295	10185805
Indeno(1,2,3-cd) pyrene	TX	6315	10185805
Isophorone	TX	6320	10185805
Methyl methanesulfonate	TX	6375	10185805
Naphthalene	TX	5005	10185805
Nitrobenzene	TX	5015	10185805
n-Nitrosodiethylamine	TX	6525	10185805
n-Nitrosodimethylamine	TX	6530	10185805
n-Nitrosodi-n-butylamine	TX	5025	10185805
n-Nitrosodi-n-propylamine	TX	6545	10185805
n-Nitrosodiphenylamine	TX	6535	10185805
n-Nitrosomethylethylamine	TX	6550	10185805
n-Nitrosomorpholine	TX	6555	10185805
n-Nitrosopiperidine	TX	6560	10185805
n-Nitrosopyrrolidine	TX	6565	10185805
Pentachlorobenzene	TX	6590	10185805
Pentachloronitrobenzene (PCNB)	TX	6600	10185805
Pentachlorophenol	TX	6605	10185805
Phenanthrene	TX	6615	10185805
Phenol	TX	6625	10185805
Pyrene	TX	6665	10185805
Pyridine	TX	5095	10185805



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Matrix: Non-Potable Water

Method EPA 9012

Analyte	AB	Analyte ID	Method ID
Amenable cyanide	TX	1510	10193405
Total cyanide	TX	1645	10193405

Method EPA 9040

Analyte	AB	Analyte ID	Method ID
pH	TX	1900	10196802

Method EPA 9050

Analyte	AB	Analyte ID	Method ID
Conductivity	TX	1610	10198604

Method EPA 9056

Analyte	AB	Analyte ID	Method ID
Bromide	TX	1540	10199209
Chloride	TX	1575	10199209
Fluoride	TX	1730	10199209
Nitrate as N	TX	1810	10199209
Nitrate-nitrite	TX	1820	10199209
Nitrite as N	TX	1840	10199209
Sulfate	TX	2000	10199209

Method EPA 9060

Analyte	AB	Analyte ID	Method ID
Total Organic Carbon (TOC)	TX	2040	10200201

Method EPA 9066

Analyte	AB	Analyte ID	Method ID
Total phenolics	TX	1905	10200609

Method HACH 8000

Analyte	AB	Analyte ID	Method ID
Chemical oxygen demand (COD)	TX	1565	60003001

Method Iowa OA-2; DRO

Analyte	AB	Analyte ID	Method ID
Extractable Petroleum Hydrocarbons (EPH)	TX	10331	90016607



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Matrix: Non-Potable Water

Method	SM 2310 B (4a)	AB	Analyte ID	Method ID
	Analyte Acidity, as CaCO ₃	TX	1500	20002806
Method	SM 2320 B	AB	Analyte ID	Method ID
	Analyte Alkalinity as CaCO ₃	TX	1505	20045005
Method	SM 2340 B	AB	Analyte ID	Method ID
	Analyte Total hardness as CaCO ₃	TX	1755	20046008
Method	SM 2510 B	AB	Analyte ID	Method ID
	Analyte Conductivity	TX	1610	20048004
Method	SM 2540 B	AB	Analyte ID	Method ID
	Analyte Residue-total (total solids)	TX	1950	20004608
Method	SM 2540 C	AB	Analyte ID	Method ID
	Analyte Residue-filterable (TDS)	TX	1955	20049803
Method	SM 2540 D	AB	Analyte ID	Method ID
	Analyte Residue-nonfilterable (TSS)	TX	1960	20004802
Method	SM 3500-Cr B	AB	Analyte ID	Method ID
	Analyte Chromium (VI)	TX	1045	20065809
Method	SM 4500-Cl G	AB	Analyte ID	Method ID
	Analyte Total residual chlorine	TX	1940	20020604
Method	SM 4500-CN ⁻ G	AB	Analyte ID	Method ID
	Analyte Amenable cyanide	TX	1510	20021607
Method	SM 4500-H ⁺ B	AB	Analyte ID	Method ID
	Analyte			



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Matrix: Non-Potable Water

pH	TX	1900	20104603
Method SM 4500-S2 ⁻ F			
Analyte	AB	Analyte ID	Method ID
Sulfide	TX	2005	20126209
Method SM 5210 B			
Analyte	AB	Analyte ID	Method ID
Biochemical oxygen demand (BOD)	TX	1530	20027401
Carbonaceous BOD, CBOD	TX	1555	20027401
Method SM 5310 C			
Analyte	AB	Analyte ID	Method ID
Total Organic Carbon (TOC)	TX	2040	20138209
Method TCEQ 1005			
Analyte	AB	Analyte ID	Method ID
Total Petroleum Hydrocarbons (TPH)	TX	2050	90019208



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Matrix: Solid & Chemical Materials

Method ASTM D2216

Analyte	AB	Analyte ID	Method ID
Moisture	TX	10337	ASTM D2216-05

Method EPA 1010

Analyte	AB	Analyte ID	Method ID
Ignitability	TX	1780	10116606

Method EPA 1311

Analyte	AB	Analyte ID	Method ID
TCLP	TX	849	10118806

Method EPA 1312

Analyte	AB	Analyte ID	Method ID
SPLP	TX	850	10119003

Method EPA 300.0

Analyte	AB	Analyte ID	Method ID
Bromide	TX	1540	10053200
Chloride	TX	1575	10053200
Fluoride	TX	1730	10053200
Nitrate as N	TX	1810	10053200
Nitrate-nitrite	TX	1820	10053200
Nitrite as N	TX	1840	10053200
Orthophosphate as P	TX	1870	10053200
Sulfate	TX	2000	10053200

Method EPA 350.1

Analyte	AB	Analyte ID	Method ID
Ammonia as N	TX	1515	10063408

Method EPA 353.2

Analyte	AB	Analyte ID	Method ID
Nitrate-nitrite	TX	1820	10067604
Nitrite as N	TX	1840	10067604

Method EPA 6010

Analyte	AB	Analyte ID	Method ID
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Matrix: Solid & Chemical Materials

Aluminum	TX	1000	10155609
Antimony	TX	1005	10155609
Arsenic	TX	1010	10155609
Barium	TX	1015	10155609
Beryllium	TX	1020	10155609
Boron	TX	1025	10155609
Cadmium	TX	1030	10155609
Calcium	TX	1035	10155609
Chromium	TX	1040	10155609
Cobalt	TX	1050	10155609
Copper	TX	1055	10155609
Iron	TX	1070	10155609
Lead	TX	1075	10155609
Lithium	TX	1080	10155609
Magnesium	TX	1085	10155609
Manganese	TX	1090	10155609
Molybdenum	TX	1100	10155609
Nickel	TX	1105	10155609
Phosphorus	TX	1910	10155609
Potassium	TX	1125	10155609
Selenium	TX	1140	10155609
Silica as SiO ₂	TX	1990	10155609
Silver	TX	1150	10155609
Sodium	TX	1155	10155609
Strontium	TX	1160	10155609
Thallium	TX	1165	10155609
Tin	TX	1175	10155609
Titanium	TX	1180	10155609
Vanadium	TX	1185	10155609
Zinc	TX	1190	10155609



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Matrix: Solid & Chemical Materials

Method EPA 6020

Analyte	AB	Analyte ID	Method ID
Aluminum	TX	1000	10156408
Arsenic	TX	1010	10156408
Barium	TX	1015	10156408
Beryllium	TX	1020	10156408
Boron	TX	1025	10156408
Cadmium	TX	1030	10156408
Calcium	TX	1035	10156408
Chromium	TX	1040	10156408
Cobalt	TX	1050	10156408
Copper	TX	1055	10156408
Iron	TX	1070	10156408
Lead	TX	1075	10156408
Magnesium	TX	1085	10156408
Manganese	TX	1090	10156408
Molybdenum	TX	1100	10156408
Nickel	TX	1105	10156408
Potassium	TX	1125	10156408
Selenium	TX	1140	10156408
Silver	TX	1150	10156408
Sodium	TX	1155	10156408
Strontium	TX	1160	10156408
Thallium	TX	1165	10156408
Tin	TX	1175	10156408
Titanium	TX	1180	10156408
Vanadium	TX	1185	10156408
Zinc	TX	1190	10156408

Method EPA 7196

Analyte	AB	Analyte ID	Method ID
Chromium (VI)	TX	1045	10162206



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Matrix: Solid & Chemical Materials

Method EPA 8011

Analyte	AB	Analyte ID	Method ID
1,2,3-Trichloropropane	TX	5180	10173009
1,2-Dibromo-3-chloropropane (DBCP)	TX	4570	10173009
1,2-Dibromoethane (EDB, Ethylene dibromide)	TX	4585	10173009

Method EPA 8015

Analyte	AB	Analyte ID	Method ID
Diesel range organics (DRO)	TX	9369	10173203
Gasoline range organics (GRO)	TX	9408	10173203

Method EPA 8081

Analyte	AB	Analyte ID	Method ID
4,4'-DDD	TX	7355	10178800
4,4'-DDE	TX	7360	10178800
4,4'-DDT	TX	7365	10178800
Alachlor	TX	7005	10178800
Aldrin	TX	7025	10178800
alpha-BHC (alpha-Hexachlorocyclohexane)	TX	7110	10178800
alpha-Chlordane	TX	7240	10178800
beta-BHC (beta-Hexachlorocyclohexane)	TX	7115	10178800
Chlordane (tech.)	TX	7250	10178800
DDD,Total	TX	10314	10178800
DDE,Total	TX	10315	10178800
DDT,Total	TX	10316	10178800
delta-BHC (delta-Hexachlorocyclohexane)	TX	7105	10178800
Dieldrin	TX	7470	10178800
Endosulfan I	TX	7510	10178800
Endosulfan II	TX	7515	10178800
Endosulfan sulfate	TX	7520	10178800
Endrin	TX	7540	10178800
Endrin aldehyde	TX	7530	10178800
Endrin ketone	TX	7535	10178800



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Matrix: Solid & Chemical Materials

gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	TX	7120	10178800
gamma-Chlordane	TX	7245	10178800
Heptachlor	TX	7685	10178800
Heptachlor epoxide	TX	7690	10178800
Methoxychlor	TX	7810	10178800
Toxaphene (Chlorinated camphene)	TX	8250	10178800

Method EPA 8082

Analyte	AB	Analyte ID	Method ID
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ-206)	TX	9095	10179007
2,2',3,3',4,4',5-Heptachlorobiphenyl (BZ-170)	TX	9065	10179007
2,2',3,4,4',5,5'-Heptachlorobiphenyl (BZ-180)	TX	9134	10179007
2,2',3,4,4',5',6-Heptachlorobiphenyl (BZ-183)	TX	9075	10179007
2,2',3,4,4',5'-Hexachlorobiphenyl (BZ-138)	TX	9025	10179007
2,2',3,4',5,5',6-Heptachlorobiphenyl (BZ-187)	TX	9080	10179007
2,2',3,4,5,5'-Hexachlorobiphenyl (BZ-141)	TX	9030	10179007
2,2',3,4,5'-Pentachlorobiphenyl (BZ-87)	TX	8975	10179007
2,2',3,5,5',6-Hexachlorobiphenyl (BZ-151)	TX	9035	10179007
2,2',3,5'-Tetrachlorobiphenyl (BZ-44)	TX	8945	10179007
2,2',4,4',5,5'-Hexachlorobiphenyl (BZ-153)	TX	9040	10179007
2,2',4,5,5'-Pentachlorobiphenyl (BZ-101)	TX	8980	10179007
2,2',5,5'-Tetrachlorobiphenyl (BZ-52)	TX	8955	10179007
2,2',5-Trichlorobiphenyl (BZ-18)	TX	8930	10179007
2,3,3',4',6-Pentachlorobiphenyl (BZ-110)	TX	8990	10179007
2,3',4,4'-Tetrachlorobiphenyl (BZ-66)	TX	8960	10179007
2,3-Dichlorobiphenyl (BZ-5)	TX	8920	10179007
2,4',5-Trichlorobiphenyl (BZ-31)	TX	8940	10179007
2-Chlorobiphenyl (BZ-1)	TX	8915	10179007
Aroclor-1016 (PCB-1016)	TX	8880	10179007
Aroclor-1221 (PCB-1221)	TX	8885	10179007
Aroclor-1232 (PCB-1232)	TX	8890	10179007



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Matrix: Solid & Chemical Materials

Aroclor-1242 (PCB-1242)	TX	8895	10179007
Aroclor-1248 (PCB-1248)	TX	8900	10179007
Aroclor-1254 (PCB-1254)	TX	8905	10179007
Aroclor-1260 (PCB-1260)	TX	8910	10179007
PCBs (total)	TX	8870	10179007

Method EPA 8151

Analyte	AB	Analyte ID	Method ID
2,4,5-T	TX	8655	10183003
2,4-D	TX	8545	10183003
2,4-DB	TX	8560	10183003
Dalapon	TX	8555	10183003
Dicamba	TX	8595	10183003
Dichloroprop (Dichlorprop, Weedone)	TX	8605	10183003
Dinoseb (2-sec-butyl-4,6-dinitrophenol, DNBP)	TX	8620	10183003
MCPA	TX	7775	10183003
MCPP	TX	7780	10183003
Pentachlorophenol	TX	6605	10183003
Silvex (2,4,5-TP)	TX	8650	10183003

Method EPA 8260

Analyte	AB	Analyte ID	Method ID
1,1,1,2-Tetrachloroethane	TX	5105	10184404
1,1,1-Trichloroethane	TX	5160	10184404
1,1,2,2-Tetrachloroethane	TX	5110	10184404
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	TX	5195	10184802
1,1,2-Trichloroethane	TX	5165	10184404
1,1-Dichloroethane	TX	4630	10184404
1,1-Dichloroethylene	TX	4640	10184404
1,1-Dichloropropene	TX	4670	10184404
1,2,3-Trichlorobenzene	TX	5150	10184404
1,2,3-Trichloropropane	TX	5180	10184404
1,2,4-Trichlorobenzene	TX	5155	10184404



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Matrix: Solid & Chemical Materials

1,2,4-Trimethylbenzene	TX	5210	10184404
1,2-Dibromo-3-chloropropane (DBCP)	TX	4570	10184404
1,2-Dibromoethane (EDB, Ethylene dibromide)	TX	4585	10184404
1,2-Dichlorobenzene	TX	4610	10184404
1,2-Dichloroethane (Ethylene dichloride)	TX	4635	10184404
1,2-Dichloropropane	TX	4655	10184404
1,3,5-Trimethylbenzene	TX	5215	10184404
1,3-Dichlorobenzene	TX	4615	10184404
1,3-Dichloropropane	TX	4660	10184404
1,4-Dichlorobenzene	TX	4620	10184404
1,4-Dioxane (1,4-Diethyleneoxide)	TX	4735	10184404
1-Chlorohexane	TX	4510	10184404
2,2-Dichloropropane	TX	4665	10184404
2-Butanone (Methyl ethyl ketone, MEK)	TX	4410	10184404
2-Chloroethyl vinyl ether	TX	4500	10184404
2-Chlorotoluene	TX	4535	10184404
2-Hexanone (MBK)	TX	4860	10184404
4-Chlorotoluene	TX	4540	10184404
4-Isopropyltoluene (p-Cymene)	TX	4915	10184404
4-Methyl-2-pentanone (MIBK)	TX	4995	10184404
Acetone (2-Propanone)	TX	4315	10184404
Acetonitrile	TX	4320	10184404
Acrolein (Propenal)	TX	4325	10184404
Acrylonitrile	TX	4340	10184404
Benzene	TX	4375	10184404
Bromobenzene	TX	4385	10184404
Bromochloromethane	TX	4390	10184404
Bromodichloromethane	TX	4395	10184404
Bromoform	TX	4400	10184404
Carbon disulfide	TX	4450	10184404



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Matrix: Solid & Chemical Materials

Carbon tetrachloride	TX	4455	10184404
Chlorobenzene	TX	4475	10184404
Chlorodibromomethane	TX	4575	10184404
Chloroethane (Ethyl chloride)	TX	4485	10184404
Chloroform	TX	4505	10184404
cis-1,2-Dichloroethylene	TX	4645	10184404
cis-1,3-Dichloropropene	TX	4680	10184404
Dibromomethane (Methylene bromide)	TX	4595	10184404
Dichlorodifluoromethane (Freon-12)	TX	4625	10184404
Ethyl methacrylate	TX	4810	10184404
Ethylbenzene	TX	4765	10184404
Hexachlorobutadiene	TX	4835	10184404
Isopropylbenzene (Cumene)	TX	4900	10184404
m+p-xylene	TX	5240	10184404
Methyl acetate	TX	4940	10184608
Methyl bromide (Bromomethane)	TX	4950	10184404
Methyl chloride (Chloromethane)	TX	4960	10184404
Methyl tert-butyl ether (MTBE)	TX	5000	10184404
Methylcyclohexane	TX	4965	10184608
Methylene chloride (Dichloromethane)	TX	4975	10184404
Naphthalene	TX	5005	10184404
n-Butylbenzene	TX	4435	10184404
n-Propylbenzene	TX	5090	10184404
o-Xylene	TX	5250	10184404
sec-Butylbenzene	TX	4440	10184404
Styrene	TX	5100	10184404
tert-Butyl alcohol	TX	4420	10184404
tert-Butylbenzene	TX	4445	10184404
Tetrachloroethylene (Perchloroethylene)	TX	5115	10184404
Toluene	TX	5140	10184404



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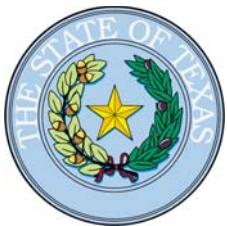
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Matrix: Solid & Chemical Materials

trans-1,2-Dichloroethylene	TX	4700	10184404
trans-1,3-Dichloropropylene	TX	4685	10184404
trans-1,4-Dichloro-2-butene	TX	4605	10184404
Trichloroethene (Trichloroethylene)	TX	5170	10184404
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	TX	5175	10184404
Vinyl acetate	TX	5225	10184404
Vinyl chloride	TX	5235	10184404
Xylene (total)	TX	5260	10184404

Method EPA 8270

Analyte	AB	Analyte ID	Method ID
2,2'-Oxybis(1-chloropropane) (bis(2-Chloro-1-methylethyl)ether)	TX	4659	10185805
1,2,4,5-Tetrachlorobenzene	TX	6715	10185407
1,2,4-Trichlorobenzene	TX	5155	10185805
1,2-Dichlorobenzene	TX	4610	10185805
1,2-Diphenylhydrazine	TX	6220	10185805
1,3-Dichlorobenzene	TX	4615	10185805
1,3-Dinitrobenzene (1,3-DNB)	TX	6160	10185805
1,4-Dichlorobenzene	TX	4620	10185805
1-Chloronaphthalene	TX	5790	10185805
2,3,4,6-Tetrachlorophenol	TX	6735	10185805
2,4,5-Trichlorophenol	TX	6835	10185805
2,4,6-Trichlorophenol	TX	6840	10185805
2,4-Dichlorophenol	TX	6000	10185805
2,4-Dimethylphenol	TX	6130	10185805
2,4-Dinitrophenol	TX	6175	10185805
2,4-Dinitrotoluene (2,4-DNT)	TX	6185	10185805
2,6-Dichlorophenol	TX	6005	10185805
2,6-Dinitrotoluene (2,6-DNT)	TX	6190	10185805
2-Chloronaphthalene	TX	5795	10185805
2-Chlorophenol	TX	5800	10185805



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Matrix: Solid & Chemical Materials

2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	TX	6360	10185805
2-Methylnaphthalene	TX	6385	10185805
2-Methylphenol (o-Cresol)	TX	6400	10185805
2-Nitroaniline	TX	6460	10185805
2-Nitrophenol	TX	6490	10185805
2-Picoline (2-Methylpyridine)	TX	5050	10185805
3,3'-Dichlorobenzidine	TX	5945	10185805
3-Methylphenol (m-Cresol)	TX	6405	10185805
3-Nitroaniline	TX	6465	10185805
4-Bromophenyl phenyl ether (BDE-3)	TX	5660	10185805
4-Chloro-3-methylphenol	TX	5700	10185805
4-Chloroaniline	TX	5745	10185805
4-Chlorophenyl phenylether	TX	5825	10185805
4-Methylphenol (p-Cresol)	TX	6410	10185805
4-Nitroaniline	TX	6470	10185805
4-Nitrophenol	TX	6500	10185805
Acenaphthene	TX	5500	10185805
Acenaphthylene	TX	5505	10185805
Acetophenone	TX	5510	10185805
Aniline	TX	5545	10185805
Anthracene	TX	5555	10185805
Atrazine	TX	7065	10186002
Azobenzene	TX	5562	10185805
Benzidine	TX	5595	10185805
Benzo(a)anthracene	TX	5575	10185805
Benzo(a)pyrene	TX	5580	10185805
Benzo(b)fluoranthene	TX	5585	10185805
Benzo(g,h,i)perylene	TX	5590	10185805
Benzo(k)fluoranthene	TX	5600	10185805
Benzoic acid	TX	5610	10185805



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Matrix: Solid & Chemical Materials

Benzyl alcohol	TX	5630	10185805
Biphenyl	TX	5640	10185601
bis(2-Chloroethoxy)methane	TX	5760	10185805
bis(2-Chloroethyl) ether	TX	5765	10185805
bis(2-Ethylhexyl) phthalate (Di(2-Ethylhexyl) phthalate, DEHP)	TX	6065	10185805
Butyl benzyl phthalate	TX	5670	10185805
Caprolactam	TX	7180	10186002
Carbazole	TX	5680	10185805
Chrysene	TX	5855	10185805
Dibenz(a,h) anthracene	TX	5895	10185805
Dibenzofuran	TX	5905	10185805
Diethyl phthalate	TX	6070	10185601
Dimethyl phthalate	TX	6135	10185805
Di-n-butyl phthalate	TX	5925	10185805
Di-n-octyl phthalate	TX	6200	10185805
Diphenylamine	TX	6205	10185805
Ethyl methanesulfonate	TX	6260	10185805
Fluoranthene	TX	6265	10185805
Fluorene	TX	6270	10185805
Hexachlorobenzene	TX	6275	10185805
Hexachlorobutadiene	TX	4835	10185805
Hexachlorocyclopentadiene	TX	6285	10185805
Hexachloroethane	TX	4840	10185805
Hexachloropropene	TX	6295	10185805
Indeno(1,2,3-cd) pyrene	TX	6315	10185805
Isophorone	TX	6320	10185805
Methapyrilene	TX	6345	10185805
Methyl methanesulfonate	TX	6375	10185805
Naphthalene	TX	5005	10185805
Nitrobenzene	TX	5015	10185805



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Matrix: Solid & Chemical Materials

n-Nitrosodiethylamine	TX	6525	10185805
n-Nitrosodimethylamine	TX	6530	10185805
n-Nitrosodi-n-butylamine	TX	5025	10185805
n-Nitrosodi-n-propylamine	TX	6545	10185805
n-Nitrosodiphenylamine	TX	6535	10185805
n-Nitrosomethylethylamine	TX	6550	10185805
n-Nitrosomorpholine	TX	6555	10185805
n-Nitrosopiperidine	TX	6560	10185805
n-Nitrosopyrrolidine	TX	6565	10185805
Pentachlorobenzene	TX	6590	10185805
Pentachloronitrobenzene (PCNB)	TX	6600	10185805
Pentachlorophenol	TX	6605	10185805
Phenanthrene	TX	6615	10185805
Phenol	TX	6625	10185805
Pyrene	TX	6665	10185805
Pyridine	TX	5095	10185805

Method EPA 9012

Analyte	AB	Analyte ID	Method ID
Amenable cyanide	TX	1510	10193405
Total cyanide	TX	1645	10193405

Method EPA 9023

Analyte	AB	Analyte ID	Method ID
Extractable organics halides (EOX)	TX	1720	10195003

Method EPA 9040

Analyte	AB	Analyte ID	Method ID
pH	TX	1900	10196802

Method EPA 9045

Analyte	AB	Analyte ID	Method ID
pH	TX	1900	10197805

Method EPA 9056

Analyte	AB	Analyte ID	Method ID



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Matrix: Solid & Chemical Materials

Bromide	TX	1540	10199209
Chloride	TX	1575	10199209
Fluoride	TX	1730	10199209
Nitrate as N	TX	1810	10199209
Nitrate-nitrite	TX	1820	10199209
Nitrite as N	TX	1840	10199209
Orthophosphate as P	TX	1870	10199209
Sulfate	TX	2000	10199209
Method EPA 9071			
Analyte	AB	Analyte ID	Method ID
n-Hexane Extractable Material (HEM) (O&G)	TX	1803	10201806
Method EPA 9095			
Analyte	AB	Analyte ID	Method ID
Paint Filter Liquids Test	TX	10312	10204009
Method Iowa OA-2; DRO			
Analyte	AB	Analyte ID	Method ID
Extractable Petroleum Hydrocarbons (EPH)	TX	10331	90016607
Method SM 2320 B			
Analyte	AB	Analyte ID	Method ID
Alkalinity as CaCO ₃	TX	1505	20045005
Method SM 2510 B			
Analyte	AB	Analyte ID	Method ID
Conductivity	TX	1610	20048004
Method SM 2540 G			
Analyte	AB	Analyte ID	Method ID
Residue-total (total solids)	TX	1950	20005203
Method SSA/ASA Part 3:34			
Analyte	AB	Analyte ID	Method ID
Carbon, organic (Walkley-Black)	TX	10340	SSA/ASA Pt 3:34
Method TCEQ 1005			
Analyte	AB	Analyte ID	Method ID



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Matrix: Solid & Chemical Materials

Total Petroleum Hydrocarbons (TPH)

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